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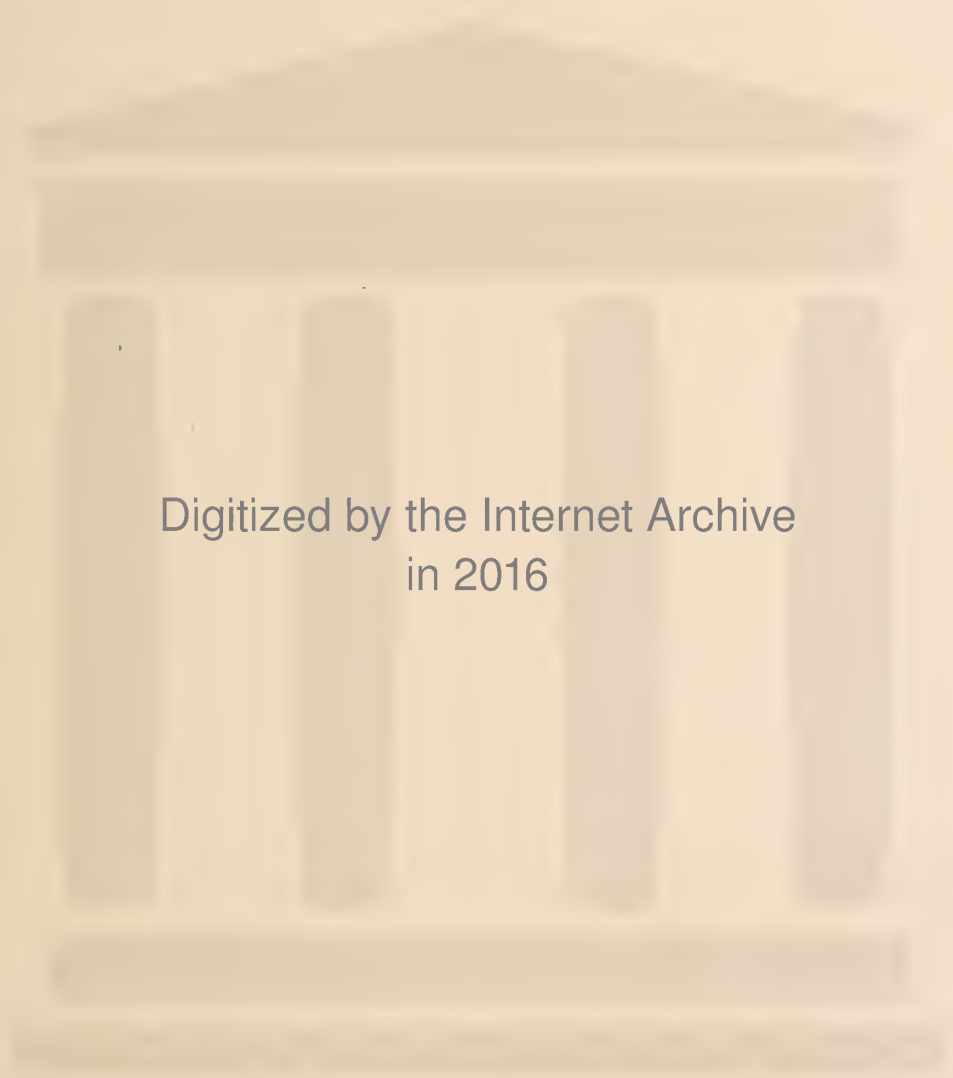
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EDITORIAL COMMENT

by D. K. M.

May the New Year Find You Well and Happy

With the start of the New Year the medical profession of Ohio, individually and collectively, may not only be proud of its service rendered to the public during the year just closed, but it has full right to be gratified with the harmonious co-operation in matters of mutual interest made possible through the county societies and the State Association.

Your county society is the unit that holds the strategic advantage for real leadership. Its members are in immediate contact with scientific problems as well as with those problems of a social and economic nature.

Only through proper organization can each member benefit from the influence and status of the entire profession, thus enabling the State Association to act as a forceful unit in matters of common interest of state and national scope.

The officers and Council of the State Association have plans well under way for the continuance and extension of mutually beneficial organization activities during 1921, including innumerable departmental projects which can only be made possible through your co-operation and your continued active membership.

May the New Year bring you its blessings of health, happiness and success.

Politics and Expediency

In spite of the fact that industrial leaders and economists like Charles M. Schwab and Herbert Hoover emphasize the necessity of governmental efficiency and economy if the individual citizen himself is expected to reach any degree of normalcy following the present period of readjustment, we find social agitators clamoring for the obvious superficial solution of present social maladjustments through lavish governmental expenditure.

While it is apparent to all that the present relationships in complex community life are far from perfect, is not the saner course, and in the long run the safer and wiser way to pause and consider before adopting a reckless and widely applied plan of large federal appropriations for state aid as a means of developing activities pertaining to health, social relations, educational systems, industrial problems and many other questions of general concern?

Incomplete and even inefficient as the educational system may be in many of the states, it is politically and economically unsound to provide through national legislation for the creation of a federal department of education, with a secretary as a member of the president's cabinet, and

authorization of an appropriation of \$100,000,000 "to encourage and assist the several states in the promotion of education."

Another proposal which apparently has the support of practically every state and national women's organization, would provide an appropriation of approximately \$4,000,000 annually to be apportioned among the various states according to population, which in turn would be required to provide an equal sum for medical and surgical care of mothers and infants. This maternity service, so the proposal indicates, "shall be available for all residents of the state."

One of the nationally known proponents of this measure advocates its passage because it is in the nature of a "public utility."

Granting that conditions are far from perfect in the education of expectant mothers and in the treatment of maternity cases, particularly in some of the rural districts in the sparsely settled states, is it contemplated that the next step shall be the "ownership" of all children by the state, as at present provided for in a measure in Russia and other European countries greatly depopulated during the war?

The National Bankers' Association in convention formally opposed the federal aid principle as applied in the form of state subsidy to the various states. Is it or is it not true that the service to be secured under any of these proposals would be as costly to the people or more so if made possible under federal subsidy, or is this system, now in effect as applied to good roads, merely a temporary expediency?

The correct answer cannot be found through a wave of popular sentiment or hysteria, but will require the calm, judicious thought of those who see deeper than the surface.

The wave of sentiment which now dictates much of the pending federal legislation may also be accountable for at least a portion of the proposals which will be presented to the Ohio legislature which convenes this month.

State medicine in various general and limited applications probably will find adherents and proponents. Provisions in various measures to be introduced probably will indicate a seeking for solution without consideration of practical results.

Among some of the proposals already being considered for introduction in the legislature some of which have meritorious purpose and part of which are logical in intended result, and practically all of which are being given thought and attention by special or general committees of the Association, are universal physical education; adequate provision for crippled children; compulsory school attendance; extension of state institutions for defectives; tuberculosis hospitals for counties; modification in the procedure of the adoption of children; licensing of private hospitals; adequate appropriations for Industrial Commission; increased benefits under the workmen's

compensation act; compensation for occupational diseases; old age pensions; eight-hour day in continuous industries; eight-hours for women; stricter prohibition laws; periodic bacteriologic examination of municipal water supply; prevention of the use of water from questionable sources for public use; proposed changes in the licensing system for practitioners; various proposals on nurse legislation and the usual spawn of cult proposals including the bill initiated by the chiropractors for a separate board.

* * *

The various committees of the State Association now in touch with many of the foregoing problems will work through the state Committee on Public Policy and Legislation. The local auxiliary legislative committeemen in each county society have been receiving and will receive frequently communications from the state headquarters of the Association. It is the duty of your committeeman to keep the members of your local society informed on these developments. His activity and effectiveness will be determined by your cooperation.

* * *

A definite example of the general uncertainty as well as the unrest is found in a number of local social experiments dealing with community health problems which, while they may not be of direct application to other communities are indicative of the general problems which must be solved some time in the near future. On page 43 of this issue is reproduced a formal communication from the Summit County Medical Society to the Akron Board of Health, which sets forth the fallacies of a too extensive application of community control of private functions and personal relations.

Salem's Typhoid Epidemic

The unfortunate situation in which Salem, Ohio, found itself during recent weeks may serve as an object lesson to many other communities. It appears that an economic loss of at least a half million dollars has been incurred largely through the attempted saving of a few hundred dollars in the construction of sewer lines. In spite of the enormous proportionate number of those affected by the contagion the death rate is remarkably low, and measures instituted by the State Department of Health, the United States Public Health Service, the local medical profession and other agencies, stand as an example of splendid cooperation. A rather detailed account of the developments and present situation in Salem is found on page 35 of this issue.

"Don't Be a Sucker"

Writing in one of the magazines of national circulation recently, Paul S. Warden declares that

physicians head the list of the various kinds of people who "fall for" the speculating game.

In part, Mr. Warden says:

"It is interesting to pick out the kind of people who fall for the speculating game. In proportion to their numbers, it seems to me that doctors head the list. I believe that, if I should go into a building full of doctors' offices and put before these medical gentlemen, one by one, a proposition to speculate in grain futures, I could 'land' twenty-five per cent of them.

"The explanation seems to be this: They work pretty hard and for long hours. They are always being routed out in the middle of the night, and their recreation is always being interfered with. The people they see are always in trouble, pouring out some tale of woe and suffering. The result is that the doctor has an unsatisfied hankering after some excitement to relieve the monotonous grayness of his daily life. As a rule, he doesn't know a whoop about business. He earns pretty good money, but it comes through his own work. He puts down in his books so many calls at so much a visit. If he skips a call he loses a fee. And he thinks it would be almighty pleasant to get a little money in some easier and more enlivening way. So he risks his savings in speculation."

Too frequently physicians neglect to investigate carefully before investing money in plausible enterprises. Within the past few weeks numerous Ohio physicians have bought stock in companies which have little if any prospect of success.

In Toledo recently a stock salesman was arrested charged with violating the Blue Sky law. It was found that he had secured as his customers a number of physicians.

Before investing in enterprises of which you have little or no knowledge it is suggested that you make inquiries. The headquarters of the State Association is at your service in providing and securing information, particularly concerning those companies or propositions which make a special effort to exploit physicians.

Thanks, And the Same to You

It is hoped that a recent complimentary expression from Dr. D. T. Vail of Cincinnati, regarding *The Ohio State Medical Journal* is characteristic of the sentiment of other members of the Association.

Whatever benefit the members derive through the Association and through *The Journal* is made possible only through your membership and those of your fellow members in your respective county medical societies, and a compliment to the Association or to *The Journal* is a compliment to yourself. For this reason Dr. Vail's kind expression is reproduced:

"I write this to comment on the appearance and growth of *The Journal*. It presents a most pleasing appearance. It is increasing in value

and interest and is thoroughly well edited throughout and deserving of continued success. *The Journal* is a worthy medium for the profession of Ohio to reach the general profession throughout the country and I wish you continued success and prosperity for the New Year."

Old Man Disability

In a recent issue of the American Magazine, J. Frank Davis writing on the subject of "Giving Old Man Disability the Laugh," points out in a most effective way the dangers of cult practices, particularly "manipulations" and "adjustments" when applied to such things as tuberculosis of the spine.

On this point Mr. Davis says:

"It is an undisputed fact, I believe, that T. B. spines ought to be kept as quiet and immobile as possible. He (speaking of a mechanical quack) rubbed and snapped and bent mine joyously with what I presume to have been good intentions, but with disastrous results. The disease advanced about as far in a year as normally it would have gone in five or ten.

"He romped blithely up and down my back, and twisted my hip (which promptly developed a fine secondary infection), and clicked my vertebrae, and pulled my leg, and ruined me generally, and, somehow, I have never been able to lay it up against him. I think he believed in what he was doing. The fault was not all his for not knowing any better, but partly mine for letting him talk me into it. I was a supposedly intelligent human being of adult age. Any first-class doctor would have told me that the strong-arm treatment would probably prove fatal, and I had access to first-class doctors—yet I paid him my good money to make me worse."

Need for Strong County Societies

Emphasizing the fact that success and activity in medical organization depends fundamentally and primarily on "live component county societies" the official publication of the state medical association in another state summarizes the situation in the following direct and terse fashion:

Renewed interest in the county and district societies is being shown in many parts of the state. Physicians realize as never before that to:

Protect their own interests,

Maintain high professional ethics,

Iron out professional jealousies,

Influence state and municipal legislation affecting health, prevention of disease, recreation, hours of labor, requirements governing the practice of medicine in this state, and health insurance, and to,

Keep abreast of the times,

a component society is essential in every county and city in the Commonwealth.

Going daily into all of the homes of the state,

knowing intimately the rich and poor, the laborer and the capitalist, you are the most influential body of men in the state. With the world upside down you can exert more positive influence for good in bringing us back to common sense ways of living than any other people, the ministry not excepted. If the doctors of the state were to unitedly ask the legislators of this state for any good thing, they would get it.

We must have a live component society in every county in the state.

Then Pay Your Dues

To keep the Ohio State Medical Association and its component county societies and academies at top notch efficiency, every member who has not already paid his 1921 membership dues should do so at once. On December 20, secretary-treasurers of 30 constituent societies had remitted dues for 853 members. This number compares favorably with the number certified on a similar date last year, but was somewhat disappointing in that it represented remittances from fewer counties than last year's figure. However, at Columbus headquarters no doubt was felt that the live wire secretary-treasurers in the other counties were on the job and would qualify a majority of their members for the new year before January.

Below is a membership barometer showing the standing on December 20, of the 30 counties that have remitted 1921 dues and their enrollments in 1920. Note Geauga and Seneca Counties are already in the One Hundred Per Cent. Club, and that Pike, Gallia, Greene, Meigs, and Scioto are almost in. Lucas County, with 145 of its 268 members paid, leads the larger societies, and Cincinnati has made an excellent start toward making good its intention of certifying 600 members by January 1.

	1920	1921
Allen	81	39
Ashland	23	17
Columbiana	70	49
Defiance	13	9
Fairfield	34	3
Fulton	27	9
Gallia	26	21
Gauga	9	9
Greene	42	33
Hamilton	507	127
Highland	25	8
Lawrence	31	14
Licking	47	25
Logan	40	22
Lorain	68	26
Lucas	268	145
Madison	19	4
Meigs	13	11
Muskingum	57	26
Ottawa	13	8
Perry	22	14
Pike	10	9
Putnam	28	17

Scioto	56	40
Seneca	29	30
Stark	135	64
Summit	212	41
Van Wert	26	14
Vinton	5	2
Warren	26	17
Total		853

Preference to Medical Claims

Effective January 1 claims for medical or hospital fees filed with the industrial commission will be referred to a special department in the claim department and can be acted upon the same day as received. The claims for compensation will be referred to the Commission for action. This will save the Commission the time which has been spent on the hospital and medical fees, will reduce the number of pending claims for compensation and effect an annual saving of more than \$12,000.

In the past all claims were filed and acted upon in the same manner, but under the new scheme claims for medical fees only are filed and acted upon separately. Seventy-five per cent of the claims filed are for medical or hospital fees alone. These since the beginning of the state insurance law, have been filed in the same manner as those for compensation, and as a result action has been delayed, all claims being acted upon in the order of their filing. This has of necessity delayed the payment of medical and hospital fees for several weeks.

Adoption of the new system will be of great advantage to members of the State Association who will find in this measure, as in other instances in the past, occasion to appreciate the results of the close co-operation between the headquarters of the Association and the medical department of the Industrial Commission.

An Indicative "Kick"

Health Commissioner Freeman interprets a letter which he received recently from a person signing himself "Grouchy Sam, the Bo," as a happy sign of the times. Friend Sam wrote:

"I stopped at the county home the other night for a 'flop.' Well, the bed was not so bad but the company was a little strong. Bugs and roaches were good company. The toilet was rank, the washrooms are more like a hog pen and the towels were like coal bin mops. Look her over, goodbye. I'm on my way to Chi."

From this it seems that even the restless gentry have attained some standards of cleanliness, and Dr. Freeman concludes that when hobos begin complaining of sanitary conditions, health and hygiene education must be getting pretty well distributed.

The Surgical Aspect of Chronic Lesions of the Pylorus and Adjacent Viscera.*

Francis G. Leonard, M. D., Cleveland

Editor's Note.—Undoubtedly, as Dr. Leonard maintains, the chronic dyspeptic, in the past, has been all too commonly classed as a neuresthenic and instead of receiving painstaking examination and treatment has been turned adrift as a hopelessly confirmed invalid. More recently, fortunately, internists and surgeons have united in attempts to do something for patients suffering from chronic lesions of the pylorus and adjacent viscera. Detailed diagnostic study of this class of patients has revealed a more or less typical symptomatology, the varying pathology and organs involved and there is now not much difficulty in arriving at a differential diagnosis and deciding upon the advisability of surgical interference. However, operation alone is no panacea and must be associated with a well planned post-operative management of all cases with the co-operation of the internist.

THE subject under discussion may be divided anatomically into two groups: (1) *peptic ulcer* with its sequelae and (2) *gall bladder disease* with its associated complications. In respect to diagnosis the symptomatology of these lesions is so closely related that their complementary discussion seems most appropriate. The cases coming under this classification are exceedingly numerous. These *chronic dyspeptics*, as they are commonly known, run a very protracted course and submit to various modes of treatment, oftentimes terminating in a state of confirmed invalidism. The older divisions of gastric disease, depending mainly upon a symptomatic basis have proved the greatest source of error. The numerous subdivisions of gastritis, for instance acute, chronic, atrophic, hypertrophic and follicular gastritis, differ, it is true, with their respective phases, but are united at the present time into fewer and more convenient groups. And many of the gastric neuroses, too, have been correctly omitted from modern literature. With the added knowledge resulting from modern technical methods many of our former conceptions are radically altered. It is well known that one-half of medical cases exhibit symptoms which are referred to the stomach. Intra- and extra-abdominal lesions, reflex and associated disorders must all be taken into consideration. The ability to utilize all methods of diagnosis and to interpret the evidence so obtained is essential for the successful management of every case that seeks medical assistance.

Gastro-intestinal study was veiled in obscurity before the advent of the stomach tube. Through the latter discovery physiologists were rewarded with a clearer understanding of the motor and secretory functions, and could impart to the medical world knowledge that invited deeper general interest. Abdominal surgeons gradually gained courage as the earlier pelvic operations were safely managed. The aseptic theory became a certainty and as a result upper abdominal investigation grew more frequent. In this manner the study of pathologic anatomy has been greatly furthered. It is to these physiologists and surgeons, the pioneers in the field, that we are so

greatly indebted for the present day status of gastro-intestinal surgery.

IMPORTANCE OF DIAGNOSIS AND DIFFERENTIAL DIAGNOSIS AND METHODS THAT ARE OF VALUE IN STUDYING SECRETORY CHANGES AND EXISTING PATHOLOGY

Peptic ulcer and gall-bladder disease, in their acute phase, have symptoms quite pathognomonic and distinctive diagnosis may sometimes be made. However, as the disease becomes chronic, certain functional and organic changes occur which obscure the clear definition of the classical type. The acid history was held to be diagnostic of peptic ulcer. Certain points were emphasized—the characteristic pain in relation to meals, the chronicity extending over years and the rhythmic cycle of events. We know now that this history does not always indicate ulcer: that an ulcer may exist though the history does not correspond to the usual type. Recent studies convince us that the so-called ulcer history is predominantly a hyper-acid syndrome, and that any condition giving rise to hyper-acidity may stimulate ulcer. Therefore a deduction of ulcer from history alone is frequently erroneous. In the words of Bassler, "Hyper-acidity should be looked upon as a symptom to as much an extent as oedema is recognized of renal, cardiac or blood disease, or a cough or expectoration is evidence of disease of the respiratory tract." Peri-gastritis, pyloric stenosis, duodenitis, peri-cholecystic adhesions, which are sequential to chronic peptic ulcer and biliary infection, and all other conditions that interfere with the emptying of the stomach are frequently associated with hyperchlorhydria. In a general way hyper-acidity suggests some functional or organic change in the organism, but it does not specify peptic ulcer.

Chronic cholecystitis with or without calculi, cholangitis and associated pancreatitis persistently cause gastric symptoms. The patient is so intent on discussing his gastric disorder that other incidents seem unimportant. A further interrogation will elicit a history of epigastric or sub-costal pain and discomfort, together with a sense of fullness and distention, or a sense of lameness and stiffness on movement of the body involving

*Read before the Surgical Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo June 1, 1920.

that area. There may be a history of sharp paroxysms of pain or transient jaundice.

Chronic appendicitis deserves mention in the differential diagnosis of disease of the pylorus and adjacent viscera because it often expresses itself in hyper-chlorhydria, pylorospasm and the typical hyper-acid history. The patient's attention is directed to the stomach and he frequently describes gastric attacks. But when questioned closely he may recall intestinal disorders of varying intensity complicated by tenderness referred to the caecal region. Frequently the history is one of chronic constipation with habitual catharsis, especially at the time of more pronounced gastric disturbance.

There are other intra-abdominal conditions that frequently offer a history suggestive of pyloric and juxta-pyloric lesions. Gastric cancer, viscer-optosis, intestinal parasites, hernia due to defects in the abdominal wall, chronic pelvic disease, peritoneal adhesions and membranes must all be considered in differential diagnosis.

The first step in the management of a gastric disorder is to attempt a clear differentiation between intrinsic and extrinsic causes. Every means at our disposal should be utilized in obscure cases. The personal history, physical examination, laboratory and radiographic investigation are all essential to comprehensive study; for even with these aids the diagnosis is sometimes uncertain. The importance of the study of a patient's history is well established. The investigator should be experienced and interested in this particular field. Sufficient time and consideration should be given to elicit the onset, the probable cause, the course and other relevant facts. This evidence is of paramount importance in drawing clear deductions when all analytical results are compared. Special attention should be paid to the character of the onset and development of a given disorder, to the role played by infections, anaemias, pregnancies, past operations and other complications; and further, to the course, its chronicity, periodicity, intermissions and remissions. Lastly, special symptoms should be noted, as emesis and its character, tarry or clay stools, emaciation or gain in weight.

The *physical examination* is valuable, but to a less degree than the well elicited personal history. The patient is usually ambulatory and presents meager objective signs. Emaciation is frequently present, depending largely on the pathologic extent. The tense abdominal wall, in contrast with the flaccid wall associated with splachnoptosis is a point worthy of mention. The discovery of peristaltic waves across the upper part of the abdomen from left to right signifies pyloric obstruction. Tenderness in the epigastrium, in the gall bladder area or over the right lobe of the liver and a hyperesthetic zone to the right of the tenth and eleventh dorsal vertebrae are signs of importance. The method of hooking the fingers under the costal margin in the gall-bladder area

and instructing the patient to breathe deeply, as described by Murphy, is valuable for deep palpation. Slight icterus at the outer margin of the sclera may be frequently observed.

A delayed gastric motility is a trustworthy index, the degree of stenosis being measured by the motor meal consistency. The presence of fermenting, stagnant stomach contents, containing food particles ingested 12, 18 and 24 hours before is encountered in reactive forms of pyloric stenosis. All variations of motility may be obtained and accurate observations may be made by radiographic methods.

Gastric analysis frequently shows a hyper-acidity. It is established that the majority of cases of hyper-secretion have a distinctly pathological basis, either in the stomach itself or in one of the internal organs, particularly those situated in the abdomen. It is true that upper abdominal lesions are often associated with hyper-acidity, but they may be found also with acidity occurring within normal or subnormal limits. The absence of free hydrochloric acid and the presence of lactic acid, together with the Boas-Oppler bacilli, coffee ground blood and tissue shreds is strongly suggestive of malignancy. Special examinations of the blood and excretions are important and frequently employed in differentiating reflex conditions.

The facts obtained by personal history, physical examination and the laboratory tests are often confusing, and to formulate a policy of treatment with the evidence so obtained might prove hazardous. Fortunately we have another method of obtaining information, namely the *fluoroscopic and radiographic examination* of the gastro-intestinal tract. The fluoroscopic report of the heart, great blood vessels and lungs eliminates reflex conditions within the chest which might produce symptoms of chronic dyspepsia. The information about the stomach is even more definite, as knowledge may be obtained in regard to its outlines, the motor activity, the fixation and resistance of the outlet, the defects in the outline of the pylorus and duodenal cap. The roentgenographic plates usually confirm the fluoroscopic report and in addition the latter plates demonstrate the correct emptying time of the stomach, engagement of the opaque meal in the caecum and its behavior in that segment. A study of the hepatic flexure and first portion of the transverse colon is especially valuable in upper abdominal disease. Acquired adhesions causing distortion of the colon are clearly outlined. This evidence is of the greatest confirmatory value and should only be considered with facts obtained by other methods. Taken alone it is useless. It should be used as correlating evidence and not as fundamental diagnosis.

A JUDICIOUS SELECTION OF CASES ESSENTIAL

The problems in respect to the medical or surgical management of these cases can be quite satisfactorily solved by putting together each bit of

evidence obtained by this analytical study. Protracted indigestion, failure under careful medical management, approaching cachexia, persistent excess of gastric secretion, increasing morbidity, the incidence of malignant changes; these factors are to be taken into consideration in selecting the most advantageous cases for surgical therapy. It seems unfortunate for the painstaking surgeon, as well as for his patient, that the value of upper abdominal surgery has been questioned. It is certainly true that many chronic intestinal sufferers have been subjected to abdominal section by indifferent, untrained operators, unstudied, undiagnosed and in general improperly managed. It is little wonder that this work is taken up with so much hesitancy and the chronic dyspeptic allowed to go unrelieved.

Fortunately, however, for the future of surgery and its strict adherents the group method of diagnosis with its trained, experienced, energetic workers has brought order out of chaos, establishing ways and means to select cases with indications and contra-indications for surgical therapy. An adoption and utilization of established methods such as described will aid materially in abolishing surgery for mistaken conditions. How frequently are we confronted with patients seeking relief from gastro-intestinal disorders and learn on eliciting their history that they had submitted to an abdominal section two, four or ten years before and received no benefit. On further elicitation we find that without preliminary study they were sent to the hospital and operated upon the following day. On physical examination there are found operative scars of kidney fixations, appendectomies and pelvic operations. The days of snap-shot diagnosis and hurried exploration belong to the past. A discreet selection of cases is most essential to the welfare of the patient, to the interest of the clinician, to the reputation of the surgeon and to the future success of surgery.

EXPLORATORY VS. PLANNED OPERATIONS

In recent years the exploratory laparotomy has become quite popular. Granted that it is necessary in a certain class of cases and defensible in the hands of the surgeon who has a strict regard for the dictates of his conscience, nevertheless it is equally true that the surgeon is placed at a great disadvantage. The proper selection of the technical features, the uncharted function or pathology in the field he is about to explore, the judicious selection of instruments, all these factors should give the conscientious surgeon ample reason for premeditation and their worthy consideration will insure his success.

It seems hardly necessary to speak in support of the planned operation, however, it may be thought to be of limited application. To illustrate its wider applicability the following points may be considered: the lesion having been located, a properly placed incision is made, the diseased

organs are examined and reconsidered in the light of pre-operative deductions. A careful palpatory examination is made of all the abdominal organs and their condition noted. The operative field is protected and made accessible. The lesion, in the case of peptic ulcer, is treated according to its location and the extent of its adjacent impairment. Gall-bladder disease can be treated with due respect to the physiologic nervous mechanism and existing pathology, the bile tract inspected and managed with propriety. Lesions showing the slightest suspicion of malignancy must be ablated, as the occasion offers, and lymphatic drain courses dissected. Suffice it to say the planned operation insures all the advantages for the patient's welfare, permitting the surgeon to utilize the highest degree of efficiency in his technique, a lessening of the operating time and a minimum amount of trauma.

CONSIDERATION OF WAYS AND MEANS FOR OBTAINING BETTER OPERATIVE RESULTS AND CORRECTING PAST DEFICIENCIES

In regard to post-operative care in upper abdominal surgery, I am convinced that there should be a closer association between clinician and surgeon. The surgeon gives little study to dietetics and is apt to permit the routine diet proffered by untrained nurses. This injudicious management often leads to disastrous results. Chronic lesions are associated with pathological changes in the muco-membranous, muscular and peritoneal layers. Stasis of the blood and lymph stream ensues and the gastro-intestinal symptoms persist long after the diseased process has been corrected.

Personal experience has evolved the necessity of treating every case of major operation on the intestinal tract exactly like an acute ulcer. After observing many cases I am convinced of the efficacy of a carefully graduated diet, from a few days of absolute starvation through many days of a non-irritating liquid food given in small quantities, to a long period of bland soft diet given at frequent intervals and reinforced when indicated by alkalies and anti-spasmodics.

In order to favor the more general and accurate recognition of surgical need in this class of cases, we surgeons should extend an invitation to the clinician to attend every operation performed on his patient who suffers from digestive disease. Primarily it is of value in demonstrating the living in relation to post-mortem pathology. Many of his former conceptions in regard to diagnostic signs and the efficacy of purely medical management would be altered. His attendance, too, would suggest to the surgeon the wisdom of utilizing his counsel both at the operative and the post-operative periods.

In regard to the technical aspect of this subject we must recall that post-operative adhesions and unphysiological conditions, the bugbear of abdominal surgery, are not only possible but probable. The operator should always bear this in mind. His

anticipation of these unpleasant sequelae will guide his hand in covering or turning in raw peritoneal surfaces, tacking or plicating attachments to prevent acute angulations, proper placing of anastomotic loops, removing chronically diseased and functionless structures as expedience offers, restoring the physiologic and anatomic relations to as normal a state as possible with the full cognizance of the patient's future in mind. I feel certain that through the observance of these preventive measures gastralgias, vicious circles, recurrent ulcers, post-operative adhesions and their unpleasant sequelae will be reduced to a minimum.

CONCLUSION

In conclusion I would suggest these topics for your consideration:

1. The chronic intestinal invalid, in the past, was too commonly classed as a neuræsthenic or uninterestingly hopeless.

2. The fundamental importance of the most detailed diagnostic study on this class of patients.

3. Peptic ulcer and gall-bladder disease, in their chronic form, frequently have symptoms so closely related that a distinctive diagnosis is impossible.

4. The appropriate selection of cases for surgical therapy.

5. The most painstaking attention paid to technical features in surgery.

6. The well planned post-operative management. To insure the best results, co-operation with internist is essential. It is only through attention paid to these details that many of the post-operative disappointments will be relegated to the past.

Bassler: Diseases of the Stomach and Upper Alimentary Tract. (Text.)

Cheney: Differential Diagnosis of Peptic Ulcer. Journal A. M. A., May 17, 1919, Vol. 72, No. 20.

Cheney: Diagnostic Groups of Chronic Gastric Disease. Journal A. M. A., May 19, 1917, Vol. 68, No. 20.

Brown: Late Results of Supposedly Successful Abdominal Operations of the Digestive Tract. Journal A. M. A., Nov. 15, 1919. Vol. 72, No. 20.

9300 KINSMAN ROAD.

Terminal Complications of Chronic Indurated Ulcer of the Stomach and Duodenum.*

James A. Sherbondy, M. D., Youngtown

Editor's Note.—In view of the fact that indurated ulcer has as a syndrome a regular recurring type of symptoms, it is rather surprising that the condition is so frequently allowed to end in acute or chronic perforation or in stenosis of the pylorus. The condition is of infective origin, according to Rosenow, and is most prevalent among young adults. Dr. Sherbondy is inclined to differ with Deaver on the importance of appendicitis as the primary focus of infection. Patients seldom come to operation until the condition has persisted on an average of seven years. Dr. Sherbondy considers all cases of chronic ulcer as surgical and he has found the results of surgical interference in acute and chronic perforations as well as in haemorrhage routinely satisfactory, both to the patient and surgeon.

IN considering the surgical treatment of duodenal ulcer, it is my purpose to set forth the results of study of a given series of particularly complicated cases. Working with my medical associates, Dr. C. R. Clark and Dr. H. E. Patrick, I have observed the results in 43 such cases, which have been treated by operation. This list includes:

Fifteen cases of acute perforation;

Seven cases of chronic perforation;

Sixteen cases of pyloric stenosis, with continuous and nearly complete retention;

Five cases of severe recurring haemorrhage.

These complications are considered as terminal conditions; that is, complications which, in the majority of cases, had there been no intervention, would have led in a short time to the death of the patient. It is only the chronic callous ulcer that will be considered here; in other words the *indurated ulcer*. This is the type of ulcer which has as a syndrome, a perfectly regular recurring type of symptoms, and which so frequently ends in acute or chronic perforation or stenosis of the

pyloris. Haemorrhage, too, may likewise occur as a fatal complication in these ulcers, although ordinarily it is not present even in mild form, in more than 25 per cent. of such cases. According to statistics of the Mayo clinic, haematemesis occurred in 6 per cent., melana in 8.8 per cent., haematemesis and melana together in 10.4 per cent.

HISTORY OF ONSET

Chronic indurated ulcer is a disease of young adults. The average age of our patients at the time of operation, was 35 years. According to sex classification, 83 per cent. were in males and 17 per cent. in females. This type of ulcer has its onset insidiously and follows a regular cycle. Usually it is single. A study of the histories of these patients discloses that they have experienced the same trouble for a number of years, with at least two or three attacks each year, of symptoms of the same character for a period of several weeks; then a period of complete or almost complete relief of symptoms until the next attack. Gradually the attacks grow more severe, more frequent, and, as food retention becomes more

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pronounced or chronic perforation takes place, the symptoms are continuous.

INFECTIVE ORIGIN

The average length of time from the onset of symptoms to the time these patients come to operation was, in all our ulcer cases, 7 years. According to the Mayo's statistics, this time was 8.8 years. We, however, shall not go into the etiology of this condition, otherwise than to recall the fact that the infective origin seems to be pretty well established. To quote from a paper by Rosenow:

"The apparently almost constant occurrence of streptococci in the depths of the ulcer appearing in man, commonly the more numerous, the younger the ulcer, and the more marked the cellular infiltration, to the almost total exclusion of other bacteria and the fact that when injected into animals such bacteria show a marked tendency to localize in the stomach and duodenum, a property which other strains of bacteria do not possess, taken in conjunction with clinical facts, constitute good evidence that streptococci are not merely accidental secondary invaders of the tissue, but are commonly the original cause as well as an important factor in preventing the healing of the ulcer."

We are not convinced that the associated subacute or chronic appendicitis, which is so frequently present in these chronic ulcer cases, is the primary focus of infection, as taught by Dr. J. B. Deaver. It is our opinion that both the appendicial infection, and the ulcer may be secondary to the same focus, located elsewhere—abscessed teeth, tonsillar infection, or sinus infection; also that the appendix may become secondarily involved from a chronic or subacute ulcer.

DIAGNOSIS

Chronic indurated ulcer of the duodenum and of the stomach are etiologically the same. In our cases 90 per cent. were duodenal and 10 per cent. gastric. The diagnosis of duodenal ulcer when uncomplicated by disease of the gall-bladder, appendix, or pancreas, is not difficult. The most important aid in that diagnosis is the clinical history. The history of hunger pain coming on one to four hours after taking of food, with quick relief on taking food, the hyper-acidity and later in the disease, food retention; all these are characteristics. *Still the most important factor is the regularity of the occurrence of these symptoms from day to day during the attack, which, in itself, may last several weeks, and from one attack to another. The so-called stomach symptoms occurring in gall-bladder or appendicial disease never have the perfect regularity of occurrence seen in uncomplicated duodenal ulcer.*

Next to the history of the patient, the most important diagnostic aid is the X-ray. Nearly all ulcers situated just outside the pylorus can be demonstrated by radiography, and these results

should be taken as corroborative evidence. On the other hand, chemical analysis of the stomach contents does not much assist in arriving at a diagnosis. Evidence of food retention, however, is of more value and should be ascertained. The presence of occult blood in the stools or red blood cells in the stomach contents are of but limited value in diagnosis. A severe haemorrhage of the stomach or bowel is of no real value as evidence of chronic indurated ulcer, unless it occurs in a patient giving a history of previous symptoms which are characteristic.

HANDLING ACUTE PERFORATION

In going over our records of the cases of indurated or callous ulcer that we have operated, we found there were 15 acute perforations of the ulcer itself. Only those cases in which the perforation was open and leakage occurring into the peritoneal cavity at the time of operation are included. Twelve perforations were duodenal and three gastric; all 12 duodenal perforations were in males; one of the gastric perforations was in a male and two were in females.

The average time between perforation and operation was sixteen hours. The average time between perforation and operation in cases that recovered was ten hours. The extremes of time were 72 hours and 4 hours. The extremes of time, in the cases that recovered, 24 hours and 4 hours.

As to the three gastric perforations, recovery took place in all.

In the 12 duodenal perforations there were two deaths. One was in a case operated 72 hours after perforation. The only operative procedure in this instance was drainage of the peritoneal cavity, under a local anaesthetic, the patient dying two hours later. This case should not have been operated. The other death was that of a patient operated 24 hours after perforation. It occurred four days after operation, and was due to duodenal constriction from the closure of a large perforation. Personally, I believe this death would have been prevented if a primary gastro-enterostomy had been performed.

The other ten cases of duodenal perforation recovered and have remained well. In all these cases the operative procedure was closure of the perforation by a mattress suture and an infolding of the indurated area around the perforation, without regard to the blocking of the duodenum, posterior gastro-enterostomy and drainage of the peritoneal cavity by a split rubber tube placed in the pelvis. In no case was there any attempt made to cleanse the peritoneal cavity by sponging or by irrigation.

A most important part of the technique of this operation was advanced by Dr. J. B. Deaver. He urged the necessity of a primary gastro-enterostomy. These cases do not die of shock or infection, if the operation is done within a reasonable time, but they do die of reperforation or

leakage at the site of the sutured area, or of duodenal block.

There are three things to be accomplished in the treatment of a perforated duodenal ulcer or of a gastric ulcer near the pylorus which is perforated: *First*, closure of the perforation; *Second*, placing the duodenum at rest to assist healing, which necessitates providing drainage for the stomach (this is accomplished by primary gastro-enterostomy), and *Third*, drainage of the peritoneal cavity.

In a case in which leakage has taken place, down the outer side of the colon and the diagnosis is not clear between a perforated appendix or a perforated ulcer, the first incision can be made through the lower right rectus. If the character of the free fluid shows the presence of a perforated ulcer, the pelvic drain is now placed and the incision closed around the tube, then the upper abdomen is opened. Thus no time is lost, since a lower incision must be made anyway. For the gastric perforations our operative procedure was closure of the perforation, infolding of the callous area, and drainage of the pelvis by a split rubber tube.

HANDLING CHRONIC PERFORATION

Of our series there were also seven cases of chronic perforation operated. In three cases the head of the pancreas had received the perforation. In one the colon was adherent to and had closed the perforation, in another the gall-bladder, and in another the gastro-hepatic omentum had closed the opening by adhesions. As to the cases which perforated onto the head of the pancreas, the duodenum was not disturbed; a posterior gastro-enterostomy was done. In the cases where perforation was on the anterior surface, the ulcer was infolded, and a gastro-enterostomy performed. In that instance where the colon was adherent to the duodenum there were extensive adhesions of the hepatic flexure, causing partial obstruction of the colon. Here a colosigmoidostomy was performed in addition to a gastro-enterostomy, with excellent results. From this series of chronic perforations two deaths resulted. One occurred in a case perforated onto the head of the pancreas and was due to an endocarditis and pericarditis developing after operation. The other death was also in a case perforating onto the head of the pancreas with a large inflammatory mass in the region of the pancreas and root of the mesentery.

STENOSIS

There were also in this series sixteen cases of duodenal stenosis from cicatricial constriction due to duodenal ulcer. We have included here only the cases where stenosis was permanent and of a degree to interfere with the function of the stomach; in other words, a terminal complication, unless relieved. We, furthermore, have observed a large number of cases in which there was a

marked food retention due to a large callous ulcer without cicatricial contraction. Here the food retention varies. Usually with relief from the ulcer symptoms there is also relief from the food retention; that is to say, the stenosis is due to the large area of the duodenum involved in the inflammatory process.

The average length of time between the onset of symptoms of pyloric stenosis and operation was one year. Many of these cases were in an extremely weakened condition when operated. Thirteen recovered and two died. The deaths occurred in patients aged 60 and 63 years. Both showed almost complete closure of the duodenum near the pylorus and both were delirious at the time of operation.

UNUSUAL CASES

One patient who recovered was a case of special interest. He had had ulcer symptoms for twenty years and marked stenosis symptoms for two years, while 24 hours before operation he developed a severe gastric tetany. He was treated for 24 hours by the free administration of saline solution, and at the end of that time a posterior gastro-enterostomy was performed. He remained free from stomach symptoms for 6 years when he died from another condition. This case showed a large stellate contraction just outside the pyloric vein, which was entirely healed, and just beyond the healed ulcer was an indurated ulcer.

In another case of particular interest the stomach was enormously dilated. It nearly filled the peritoneal cavity. In addition to the marked dilation, there was a decided hypertrophy of the walls involving the muscular coats. This stomach, indeed, looked as if it, because of the enormous dilation and thickened walls, would never functionate again. The patient not only made a rapid convalescence following operation, but has remained free from stomach symptoms for three and one-half years; that is, since operation.

We have also operated five cases for severe recurring haemorrhage. In four of these cases the ulcer was duodenal, in one gastric. In three of the bleeding duodenal ulcers the ulcer was located on the posterior wall near the pyloric vein, in one case on the anterior wall near the pyloric vein. Dr. W. J. Mayo has made the observation that the majority of severe haemorrhages occur in ulcers located on the posterior wall near the pylorus. For the bleeding duodenal ulcers a posterior gastro-enterostomy, associated with ligation of the blood vessels in the region of the ulcer, with unfolding of the ulcer area, was the operative procedure. In all cases recovery was effected.

As to uncomplicated indurated ulcer, the operative procedure of choice, we believe to be an infolding of the ulcer and a posterior no-loop gastro-enterostomy. The gastro-enterostomy should be made in the line of the jejunum. Chronic catgut should be used throughout. *Duodenal ulcers*

we have not felt under necessity to excise, since the danger of carcinoma developing at the ulcer site is almost negligible. On the other hand, cal-culous ulcers of the stomach or pylorus should be excised whenever possible, on account of the danger of malignant change. If the excision is done near the pylorus a gastro-enterostomy is also required.

Our experience with closure of the pylorus has been limited, as we have not been convinced that it is of value. In chronic perforations onto the head of the pancreas it might be of benefit, as also in recurring haemorrhage from ulcer low down in the duodenum; for instance, in the region of the ampulla of Vater.

CONCLUSIONS

It has been our practice to consider all cases of chronic ulcer as a surgical condition and to be best treated by operation. Cases presenting themselves without a previous history of chronic ulcer are regarded as medical and treated medic-ally, unless they manifest symptoms of a compli-cating character, which demand surgical inter-vention. As stated before, the average length of time these patients have had their disease before coming to operation was seven years. Therefore, they were in the chronic class when diagnosed.

At the same time, the results obtained by surg-ery in uncomplicated duodenal ulcer have been so satisfactory, both to the patients and ourselves, that we are forced to consider any disease which furnishes as many severe and grave complica-tions as chronic ulcer does afford, as a serious condition. If we advise removal of an obstructing prostate before serious renal changes takes place, removal of gall-stones before serious complica-tions occur in the bile ducts and pancreas, re-moval of tumors before serious degeneration oc-cur, then why not, in a disease presenting a defi-nite symptomatology and resulting in so many serious or fatal complications, such as acute and chronic perforation, stenosis and haemorrhage; why not refer these cases for surgical treatment, when the operation can be done with almost no mortality and with such gratifying results to the patient?

DISCUSSION

DR. W. D. HAINES, (Cincinnati): Deformity induced by the induration associated with or fol-lowing ulcer is usually followed by pyloric insuf-ficiency, for the reason that in nearly all cases of gastric ulcer the lesion is situated at or in the py-loric portion of the stomach wall. From the view-point of embryology the stomach terminates at the place where the common bile duct empties into the gastro-intestinal tract. Ulcer situated cephalward to the little bundle of circulars fibers, usually called the pyloric ring, are prone to un-dergo malignant change in the margin of the chronic ulcer, but the calamity of perforation is not as frequent as it is in ulcer situated caudal-ward from the pyloric ring.

The incidence of cancer developing in the mar-gins of ulcer is variously estimated to be from 50 to 100 per cent. That is to say, that one-half to

all of the patients who have cancer of the stomach give a history of having had ulcer. There is also a wide discrepancy in the opinions held by sur-geons as to the relative frequency of perforation in the two localities; perhaps the facts are to be found somewhere between the extremes, say four perforations will be seen below the pyloric ring to one above the ring. In dealing with chronic indurated ulcer we practice removal of the ulcer site by the wide resection or pylorectomy in con-junction with gastro-jejunostomy.

Infolding of the wall combined with gastro-jejunostomy for chronic bleeding ulcer situated below the pyloric ring has proved very satis-factory.

In dealing with perforation much, I had almost said all, will depend upon the length of time which has elapsed since the accident took place. As a general working rule, which has exceptions only at the clinic of wide experience and rapid operator, the operation which will save the great-est number of lives is the one which is devoted to rapid, complete closing of the perforation.

I have not time to elaborate on this statement, but I want to commend the practice to those of the Section who are trying to do a drainage operation on the stomach in conjunction with closing the perforation. You will save more lives by doing a two-stage operation in these cases. We do not practice pyloric exclusion in dealing with terminal complications as we prefer pylorectomy or com-plete resection of the ulcer bearing area.

Early and wide resection of the wall in cancer cases offers about the same chances to the pa-tient as early, radical operation for cancer of the breast in the woman.

DR. DUDLEY W. PALMER, (Cincinnati): There is much of importance in the very excellent paper of the essayist to comment upon, but I shall speak only of one or two phases of the subject and my discussion is more to bring out what has been the experience of other surgeons, or what they may advise in regard to the treatment of ulcers in the second and third portions of the duodenum. It has been my misfortune to have had two cases of ulcer definitely located beyond the first portion, and the first of these cases died on the eleventh day, post-operative, from a most intense haemor-rhage. The patient was a man of 220 pounds, and gave a history that was decidedly a typical gall-bladder history; in fact he had been told he had gall-stones by several surgeons. At opera-tion a pathological gall-bladder was found and in addition a large mass about the head of the pan-creas, which in a man as fat as he, was interpreted as being a result of the bile duct infection. At post mortem, however, a deep chronic indurated ulcer, the size of a thumb nail was found which had perforated into the pancreas. There were clots of blood in this ulcer and the blood filled the intes-tinal tract distal to the ulcer. I might add that the X-ray pictures made prior to operation did not show a deformed duodenal cap.

The second case is that of a young discharged soldier, who gave a typical duodenal ulcer history but in whom again the Roentgenologists hesitated to make a duodenal ulcer diagnosis. At operation a definite indurated area was to be felt in the lower part of the second portion of the duodenum on the wall away from the pancreas. A short loop gastro-jejunostomy was made, but the man has not been relieved of the symptoms and in fact is no better off than he was prior to operation. I have talked to several other surgeons who have had experiences similar to mine in the treatment of ulcers in this region of the duodenum and last fall while visiting one of the clinics a post-opera-tive death occurred from haemorrhage, from an ulcer, as in my first case. I have come to the con-

clusion that some different line of treatment must be worked out for the treatment of these cases, and I hope the discussion will bring out something of value in this regard.

I have made it a rule to have all cases of perforated ulcer examined as to the potency of the pylorus at a period of from three to six weeks after operation. In a not inconsiderable number of cases of perforated ulcer, I have at no time

made a primary gastro-enterostomy, being satisfied with the simplest closure of the perforation. In no case has the X-ray, made post-operative, shown the advisability of a gastro-enterostomy and in these cases a gastro-enterostomy would not only have been unnecessary as shown by subsequent history, but would have added a definite additional risk to an already precarious condition of the patients.

Scabies, a Possible Menace: Its Recognition and Treatment *

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Editor's Note.—Considering the striking incidence of scabies in the Allied Armies it is rather remarkable that the itch has not become far more prevalent in civilian life since demobilization. No doubt this control is due to the precautions taken at the embarkation and demobilization cantonments by the medical officers. After considering what authorities in the war had to say on the subject, Dr. Miller describes the differential diagnostic points in determining typical itch and details both the French and a more preferable and effective method of treatment.

THE very efficient care and rigid physical examination of the men from overseas, at the ports of embarkation, and the services of trained dermatologists at the various cantonments, accounts for the fact we have not had a great increase in scabies in civil life.

INCIDENCE OF SCABIES IN THE ARMIES

The writers personal experience while examining several thousand men in the draft, confirms the findings of others, especially at the mustering offices, and in the dermatological wards of the base hospitals. Hailperin,¹ at Camp Lee, in approximately 8,000 men examined found only twenty cases of scabies in 469 men with various types of dermatoses. These figures rapidly changed when reports were received from the large hospitals, chiefly in France. Capt. Knowles, A. E. F.² reports that out of two thousand men treated in the skin department, 500 were victims of scabies, and if cases reported as so-called "inflammation of the connective tissue" (ICT) were included, almost 1,000 more cases would be classified under the diagnosis of scabies; that is 75 per cent. of the cases were either frankly scabies or secondary to scabies. Dubreuilh,³ the distinguished French dermatologist, remarks that the civilian and military hospitals are incumbered with cases of scabies. Milian,⁴ reports 500 cases of scabies per month in every two army corps (French) and he says this has been the average for some time. These figures also hold good for the British army, for according to MacCormac⁵ skin affections among the French soldiers, referring chiefly to scabies, were much less than those seen in the British troops. Mitchell⁶ comments on the large number of men infected with scabies who passed through Camp Pike during his assignment and says there seems to be a lamentable failure on

the part of medical officers to recognize scabies and that cases of ringworm and scabies by the thousand passed through the station and were returned to civil life.

THE MENACE OF SPREADING SCABIES

It will not be long before the various channels of travel will again be open, and as we have been advised as to the increasing prevalence of itch in Europe, scabies may be disseminated throughout the nation, and will cause great discomfort in the civil population for years to come. According to Montgomery,⁷ the obscure atypical cases, and they are not so infrequent, are very elusive, and because scabies is seldom cured unless recognized and never spontaneously dies out, may constitute a really grave malady from nervous exhaustion and want of sleep. The spread of venereal diseases since the war has surpassed even the extremest pronostications, and only energetic and thorough management will stem the flood of scabies.

DIAGNOSIS

The minute animal parasite, the *acarus scabiei* or itch mite is responsible for the multiple skin lesions found in scabies. The great variety of lesions namely papules, vesicles, pustules, scratch marks and crusts will of themselves arouse suspicion, but when the location of the eruption is also noted, the disease showing a predilection for the flexor surfaces of the wrists, the penis, the neighborhood of the nipple in women, the flexor surfaces of the extremities, and the anterior surface of the trunk in both sexes, the diagnosis is practically made. It will be noted that I have purposely omitted mentioning the webs of the fingers as a point of predilection, for in many cases of civil as well as military life the hands are not involved. According to MacCormac⁵ interdigital burrows were present typically on only 13 per cent. of his cases. This is also true of clinic and hospital

*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.

patients, and is largely accounted for by occupation, for where rough usage and frequent scrubbing of the hands becomes necessary, the mite can not live. Workers in oils, grease and graphite never harbor the itch mite in this location, and the soldier, whose occupation is now largely mechanical, is likewise free. The women in the home, under present economic conditions, assume a large part of the household duties, washing of clothes and dishes, and likewise the girls employed in the factory, where dirt, together with dyes and other irritating but necessary substances, used in the trades abound are also found free of finger lesions. The burrow which we read so much about in the text books is always of great interest to the student, and one is fortunate indeed who can demonstrate the minute zigzag line, consisting of blackish or whitish dots, the width of a thin thread, and from the smallest fraction to one-eighth inch in length. Usually by the time the patient presents himself for an examination, secondary conditions, such as a dermatitis from ill-advised treatment, furuncles, impetigo, folliculitis and septic sores-ecthyma, make it rather difficult to point out this much described diagnostic sign. The parasite can best be demonstrated by inserting a small flat scalpel under the suspected line or vesicle, and with a sawing motion, the cuticle is removed, usually with the itch mite intact. Lay the shaving on a microscopic slide, bottom side up and examining it in glycerin.

CONFUSING CONDITIONS

Scabies may mimic a more or less generalized eczema of the papular or lichen-like type. When vesicles predominate the picture may resemble dermatitis herpetiformis of Duhring, or a dermatitis due to contact with deleterious mineral or vegetable substances. According to Lane (personal communication) the acarus may give rise to a purely itchy affection resembling urticaria. A description of the various dermatoses with which scabies may be confused would not be complete unless early syphilis was mentioned, remembering the foreskin and the glans penis is a favorite location for the itch mite. A ruptured vesicle plus infection may give rise to a sore closely resembling a chancre. The skin condition found in pediculosis corporis may to the untrained eye cause confusion. The bite from the louse is general in distribution, exclusive of the face, hands, feet, lower arms and lower legs. Lesions are especially noted on the extensor surfaces of the upper arms and upper legs, and the posterior surface of the trunk, particularly across the shoulders, and the lower back (waist line.) When the louse is suspected always search the seams of the underclothes of the patient, for here oftener than on the body will be found the pediculus. The picture differs from scabies in that we find linear scratch marks, and small punctate haemorrhagic lesions, excoriations, crusts and small boils. Finally in arriving at conclusions, given a case with multi-

ple cutaneous lesions, limited to certain anatomical parts, with intense itching, especially at night and the presence of the itch mite, the evidence is complete.

TREATMENT

Unless thoroughly attacked the disease is obstinate. The old adage "make haste slowly" certainly applies to the treatment of scabies. The French "while you wait" method seems indeed thorough. At the St. Louis hospital in Paris the patient is given a bath containing 90 grams of potassium sulphide in thirty gallons of hot water. After remaining for one-half hour in the bath, he is scrubbed with green soap using a hand brush, then he reclines for a further period in the bath; in the meantime his clothes have been disinfected. He is then rubbed with sulphur ointment and dismissed. It is not uncommon to see the patient return in a few weeks or months for another sulphur "cure."

A more satisfactory method, in the opinion of the writer, is the proper and thorough rubbing by the patient himself. The rubbing is done without the supervision of an attendant, if the clinician has confidence that the work will be done thoroughly. Without a preliminary bath the patient is given an ointment containing 5 per cent. balsam of Peru and 10 per cent. of sulphur. A minimum of fifteen minutes is taken for the rubbing of each patient. The ointment is rubbed in thoroughly on every portion of the entire cutaneous surface, not even the smallest part is missed, except the face and scalp. The rubbing is repeated for the next three days. A cotton union suit is worn in order to retain the ointment, and although disagreeable, is not removed at bedtime. Sometimes it is necessary to cover the hands and feet, especially in very young children, and this is done of course, by wearing suitable gloves and stocking. Especial attention is given to the genitals, buttocks and breasts while rubbing. Great care must be exercised while rubbing not to cause a sulphur dermatitis. On the fifth day a warm bath with plenty of soap is ordered, together with a change of clothes. All articles of clothing must be carefully disinfected. During the course of rubs inquiry is made of other members of the family for suspected scabies. It is this lack of thoroughness in which lies the fault of the French system, as outlined above. Following the bath the patient reports for inspection, and if there is evidence of an irritation of the skin or itching, the patient is given a dusting powder. If the irritation of the skin from vigorous rubbing, or if the irritating effects of the sulphur is at all marked, a bland ointment answers admirably. Occasionally it may be necessary to repeat the course of sulphur rubs, or a 2 per cent. beta naphthol ointment may be substituted.

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 628 ELM STREET.

A Report on the Treatment of 202 Cancers of the Skin*

H. N. Cole, M. D., Cleveland

Editor's Note.—In agreement with other specialists, Dr. Cole emphasizes the necessity of getting hold of malignancies of the skin and pre-cancerous dermatoses as early as possible to secure therapeutic results. There is no one method which can be used successfully to the exclusion of all others. Dr. Cole uses radium, X-ray, electrolysis, electro-coagulation and radical operation, according to the nature of the condition present in each case. He absolutely advises against the use of caustics, pastes and carbon dioxide snow. It is also necessary to assume a conservative attitude in any report, however good, of the treatment of malignancy. Enthusiasm has seen many methods of therapy scrapped before it had outgrown its initial force. Radium and radiography should not be used by the inexperienced as more harm than good may be done. Occasionally by varying the methods of therapy even recurrences may be controlled and the malignancy finally cured.

IN reporting this series of 202 cancers of the skin the intention has not been to make an exhaustive survey, but rather to give a few statistics as to age, sex, incidence and method of treatment. We have long ago found that there is no one method that can be used in treating cancers to the exclusion of other methods. The age of the patient, the location, duration and the extent of the lesion may make all the difference in the world as to the selection of therapy and as to final results.

INCIDENCE OF AGE, SEX, LOCATION AND OTHER CONSIDERATIONS

In these 202 cases, 128 were males and 74 females. There were 68 cancers of the nose; 50 of the cheek; 26 of the lower lip; 5 of the upper lip; 13 of the forehead; 25 of the temple; 4 of the naso-labial fold; 10 of the eye lid; 7 of the ear; 6 of the neck; 2 on the back; one on the abdomen; one of the leg; two at the canthus of the eye; three in the mastoid region; one of the shoulder and one on the chest above the breast.

In this series of cases we find many times that there was more than one lesion present. One patient had four lesions and one had three. There were ten cases with two. One patient with an extensive lesion involving one entire cheek, an area on the nose, one on the temple and an area on the back of each ear.

There is one interesting observation in connection with the lip lesion. *Of the 26 cases with lesions on the lower lip all of them were males and practically every man a smoker.* Of the five lesions of the upper lip, two were males and three females, and in the cases of the three females the lesions were above the muco-cutaneous border.

Of the 202 patients there was one age 18, one 27, three 29, 15 between the ages of 30 and 40,

40 between the ages of 40 and 50; 49 between the ages of 50 and 60; 62 between the ages of 60 and 70; 28 between the ages of 70 and 80, three between the ages of 80 and 90. In 52 of the patients the lesion had been present for around a year, in 25 of them four years; 13 around five years; three around six years; one seven years; one eight years; two nine years; three ten years and one each 12, 15, 20, 25 and 30 years. *Twenty-six of the patients were not sure how long they had had the trouble and of course this is more or less true of any patient with an epithelioma. They are quite prone to pay no attention to it until the lesion has reached large proportions, merely looking upon it as a pimple.*

REMEDIES USED IN TREATMENT

In the treatment of these cases, we might add that the remedies used were radium, the electric needle, X-ray, electro-coagulation or diathermy so called and combinations of two or more of these remedies. My radium consists of a 10 milligram flat applicator and two twenty-five milligram tubes. In passing we would like to say that we absolutely deprecate the use of caustics, arsenic paste or carbon dioxide snow in any form. It is true that occasionally with these remedies that one succeeds in curing a patient and they are the only patients ever heard of, while the ones who get worse consult someone else.

VALUE OF PROPER AND DANGERS OF PROMISCUOUS TREATMENT

Epitheliomas of the skin, if seen early and treated properly by an experienced person, give most excellent results. If seen late or if treated improperly or by a person who is not experienced no one can tell what may happen. They are too serious to be touched by an amateur and we regret very much the fact that X-ray machines and small plaques of radium are being distributed around promiscuously throughout the country by companies interested in their sale.

*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920. From the Department of Dermatology and Syphilis of the Medical Department of Western Reserve University and of Lakeside Hospital.



Figures 1-2. Rapidly growing epithelioma of three months duration. (2) Result of radium therapy.

They will do incalculable harm to both the patient, the physician and the appliances. *We see altogether too many patients who have been experimented on to their detriment.*

Of the 202 cases we wish to report, before giving our results, we would like to say that they are probably so good, due to the fact that a person is more prone to consult a physician early when the seat of the trouble is on the face. The lesion on the breast or in the vagina may be neglected for a long time, while a lesion on the face, because of the fact that it causes comment brings the patient earlier to a physician. Hence their greater amenability to treatment.

Of the 202 cases, 98 of them were treated with radium; 12 of them with the electric needle, 9 of them with X-ray, 7 of them with electro-coagulation, 46 of them with a combination of two or more of the above remedies. Two patients refused treatment. Twenty-two of them have just completed treatment hence mean nothing for our series though they are cured for the present. Four of them are dead. Two of them are worse.

Of this series, many of the patients had previously had treatment, either by operation, X-ray, radium or by one of the many pastes or caustics that, we regret to say, are used too generally. For example, one patient with an epithelioma on the lip had a recurrence one year after operation. He was then treated with X-ray and radium and has been well one year. Another patient, with an epithelioma on the lip recurring four years after operation, has been well for one year after radium and X-ray therapy. Another patient with an extensive epithelioma on the cheek,

which recurred two years after operation, has cleared up entirely and is apparently cured with radium for the past six months. One of our patients had an operation for a lesion of the naso-labial fold with recurrence four years afterward, the lesion invading the mucus membrane of the nose. He has been treated with radium and X-ray and is apparently well for six months. Twelve of our cases consulted us because of relapses after caustics. They have been treated with one or more of the four remedies we use and six of them are well for a year, four are well for two years, one of these, an extensive lesion of the cheek, was well for two years and was killed in an accident. One patient is at present under treatment.

RESULT OF RADIUM THERAPY

Of the 98 patients treated with radium I am able to give statistics of 77. Fifteen of them are well for a space of time under a year; 18 are well for one year; 15 of them are well for two years; 7 for three years; 15 for four years, and 7 for five years. Of this last group two were lesions of the lip. We realize that in giving statistics that they are only statistics and that our evidence may not be conclusive for as yet too short a space of time has elapsed, hence we recommend great conservatism.

RESULTS OF X-RAY TREATMENT

Of the nine X-ray patients, three of them have been well for three years, the rest are still under treatment. We use the electric needle and in some cases it works quite well in connection with other remedies. Of the 12 patients treated one

has been well one year and five for five years. It is especially valuable in lesions involving the inside of the lids where it is difficult to get at with radium or X-ray. *However, I have had six recurrences after the electric needle and do not use it except in combination with other remedies. At present we would not advise its use generally. It is very difficult to get all the cells with this remedy and we believe in such cases that electrocoagulation or diathermy is a better remedy.* We employ this remedy a great deal in combination



Figure 3. Epithelioma of the upper and lower lids, involving the inner side of the lids. Results of X-ray treatment and electrolysis.

with radium and X-ray and have used it exclusively in seven cases. Of these three have been well under a year, one for one year and one for four years while there have been two recurrences.

COMBINED TREATMENT

Our combined treatment cases amount to 46. Eleven of them have been well for under a year; 12 have been well for a year; 11 for two years and two for three years. It has not been possible to give full information of a certain number of cases. In some instances we have advised operation in connection with the remedies above employed. In several of our cases we advised operation alone or following X-ray.

One of our lip cases, where radium and X-ray were employed in conjunction, is now dead. Another is still living and well after two years; two after three years and one after four years. Of the other patients who died, one was a very extensive lesion of the nose and two were ex-

tensive lesions of the cheek. Each had had treatment formerly with caustics and each did not respond to any kind of treatment.

RESPONSE TO VARIED TREATMENT

We often see a case, which, for a time, will respond to one type of treatment and then get worse, but which will react nicely to another one of our methods of treatment advised. We have several times seen a patient get worse under X-ray treatment and then respond to massive



Figure 4. Numerous epitheliomata involving the entire side of the face with repeated recurrence after caustics. Result of radium therapy.

doses of radium and vice versa. One of our patients, a physician with a lesion at the nasolabial fold, had had two treatments, with electrolysis with recurrences. We then treated him with radium with recurrence. The patient was then operated by a surgeon and has been well for two years. *There is no one sure cure and a conservative man must be well equipped and in a position to use the one or more best remedies for that certain case. The physician who uses one remedy to the exclusion of all others is certainly making a mistake.* In several instances no treatment was advised as the patients were too far gone and we felt that it would only prolong their misery.

THE QUESTION OF OPERATION

As to the question of the relative advantage of

the knife and the four remedies which we employ, the writer would say that in most epitheliomas of the face, excluding lesions of the lip, that as a rule the knife should be considered last. The scar resulting from operation will be much more unsightly, contractures are likely to result and paralyses are very common, while with our remedies, above mentioned, these difficulties can in most cases be overcome. *However, we feel that in lesions of the lip, if there is any evidence of gland involvement, that combined local treat-*

sary as tumor cells will be lodged throughout the dense scar tissue and protected thereby.

CONCLUSIONS

In a series of 202 cases of cancers, most of them on the face, the writer reports results.

In treating malignancies of the skin we should get them as early as possible and all pre-cancerous dermatoses should be removed as early as seen.

There is no one method which can be used to the exclusion of all others in treating malignancy of the skin.

We advise the use of radium, X-ray, electrolysis, electro-coagulation and operation, according to the case.

We absolutely advise against the use of caustics, pastes and carbon dioxide snow.

One must assume a conservative attitude in any report of treatment of malignancy and not be carried away by enthusiasm through a few good results.

We would deprecate the general use of small amounts of radium and of X-ray machines by inexperienced physicians. Many lesions may be stimulated thereby and many burns and scars result.

Since the above was written one of my cases with an epithelioma involving both eye lids from the outer to the inner canthus and extending back under the lids with a junction with the conjunctiva has had a recurrence. This recurrence reacted to no form of therapy locally and we finally found it necessary to have a total enucleation and surgical removal of both lids.

2073 E. NINTH STREET.

NEW AND NON-OFFICIAL REMEDIES

During November the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

L. A. Van Dyk—Benzyl Benzoate; Benzyl Benzoate 20 per cent.; Benzyl Benzoate 20 per cent. Aromatic. The Heyden Chemical Co.—Vargol. Intra Products Co.—Benzyl Alcohol; Ven Sterile Solution Benzyl Alcohol.

PROPAGANDA FOR REFORM

Helping the Council.—There are many physicians who, while figuratively patting the Council on Pharmacy and Chemistry on the back, do nothing to aid its efforts. On the other hand, there are men in the profession who give the Council active support. Such a man wrote to a pharmaceutical concern that he was receiving advertising concerning its products and suggested that until these products had been accepted by the Council, it was a waste of postage to send this. He explained that he depended entirely on the Council in such matters as these (Jour. A. M. A., Nov. 6, 1920, p. 1275).

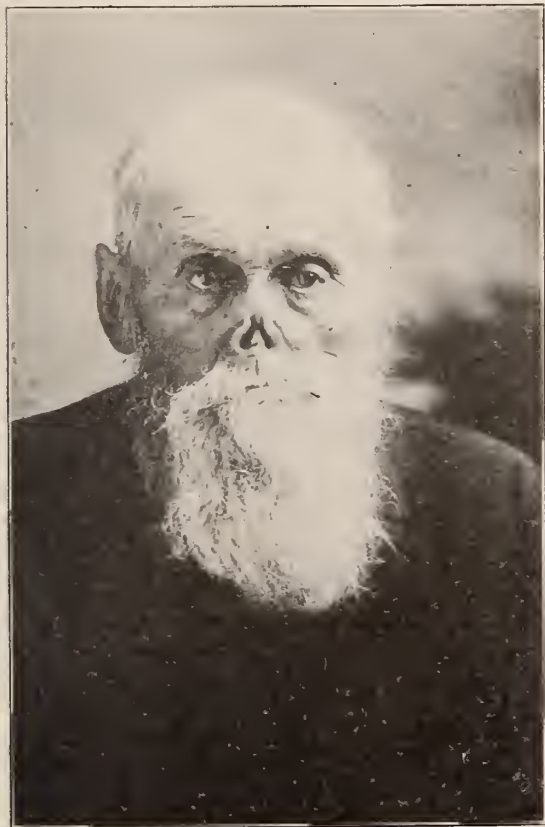


Figure 5. Extensive epithelioma involving the end of the nose and nasal septum. Duration seven years. Results of combined treatment X-ray, radium and electro-coagulation therapy.

ment and operation by the surgeon are indicated. Nevertheless, we are becoming more and more convinced that in early lesion on the lip we can achieve just as good results as the surgeon.

As to the lesions which give us the most difficulty, we would name them as epithelioma of the lip, of the naso-cheek junction and lesions involving the eye lids and extending into the inside of the lid. These cases all require careful watching and intensive therapy. We generally treat lesions on the inside of the lids with either the electric needle or by electro-coagulation and in addition X-ray and radium. In patients with much scar formation in the lesion, either due to previous treatment or to the disease, we likewise find that more intensive therapy is neces-

Acute Mastoiditis Following Influenza: With Report of a Series of Cases.*

Walter E. Murphy, M. D., Cincinnati

Editor's Note.—In the experience of many observers acute mastoiditis was one of the most prevalent complications of the influenza epidemics. Dr. Murphy found its incidence at the Cincinnati General Hospital as 1.87 per cent. of all influenza cases, 6.4 per cent. of all pneumonia and 40.9 per cent. of all ear involvements. Also the infection with the streptococcus was especially virulent. So much so that early in the first epidemic Dr. Murphy instituted the practice of having X-ray plates made of all the cases as soon as any ear condition developed. In this way cases were diagnosed before middle ear involvement occurred. On operation in all cases, and this was also the experience of other observers, the pathological conditions found were those that could only have existed after a much longer period of involvement than was apparent from the clinical symptoms.

DURING the late epidemic of influenza we experienced the frequent complication of middle ear and mastoid involvement. In this respect it differed materially from the previous epidemics.

Of the 481 cases of influenza admitted to the Cincinnati General Hospital, 141 cases developed pneumonia. Of these 141 cases twenty-two developed some middle ear complication: being 4.58 per cent. of all influenza cases and 15.6 per cent. of those complicated with pneumonia. Of the twenty-two cases, nine developed acute mastoiditis. A percentage of 1.87 of all influenza cases and 6.4 of all pneumonias and 40.9 of all ear involvements.

In spite of the fact that all cases were seen early and a free incision of the drum membrane made, a large percentage of these cases went to the operating table for acute mastoiditis. This led us, early in the epidemic, to believe we were dealing with some unusual condition, and an investigation was begun.

ONSET AND SYMPTOMS

In some of the cases the rupture of the drum membrane and the discharge from the external ear were the first symptoms noted, the patient having complained of no pain in the ear previous to this time. In these cases as well as all others the membrane was incised for the purpose of freer drainage and every effort was made to continue the drainage and effect a cure: by irrigations and instillations of five per cent. aluminium acetate solution. Others showed no middle ear involvement, but did complain of tenderness upon deep pressure over the mastoid region. These cases soon showed middle ear involvement, and incision of the membrane resulted in the discharge of pus in every case within a short period.

The pus cultures proved to be a very virulent streptococcus. Three contained pneumococci, and in only two were they haemolytic in character.

Early in the epidemic we instituted the practice of having X-ray plates made of all cases as soon as any ear condition developed, and were

amply rewarded in this. The most typical of all the cases is here presented.

A TYPICAL CASE

CASE 4.

Feb. 17, 1920—Admitted with influenza pneumonia.

Feb. 27, 1920—Temperature normal.

Feb. 28, 1920—Temperature normal, and pneumonia healed.

Feb. 28, 1920, P. M.—Pain and discharge from right ear and tenderness over mastoid. Temp. 101.2°.

Feb. 28, 1920, to March 2, 1920—Symptoms remained about the same.

March 3, 1920—X-ray examination showed marked clouding of cells on the right, and of lesser degree on the left.

Up to this time there had been no physical signs to indicate any involvement of the left side. Pressure over left mastoid elicited slight pain, but the middle ear and drum membrane were normal.

March 3, 1920—Bilateral simple mastoidectomy was performed and exposure of the cells showed a wide involvement of the right mastoid, with the cells filled with pus; the lining membrane of the cells thickened and considerable destruction of bone with a paranasal abscess present.

On the left side the cells were filled with pus and the lining membrane thickened but there was no destruction of bone. Cultures taken of the pus in the antrum showed streptococci. The blood culture was negative. In this case the duration of the disease as judged from the first physical symptoms on the right side was five days and on the left side was twenty-four hours, but the pathological findings could not possibly have developed within that period.

REPORTS OF OTHER OBSERVERS

While the case reported in detail demonstrates most clearly the presence of mastoid disease before the middle ear involvement, a careful study of the other eight cases shows them to be of similar type. All cases were operated on in from one to ten days from the apparent onset of the disease, and the findings at the time of the opera-

*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.

CASES	Date of first ear symptoms	Date of first mastoid symptoms	REPORT OF CASES		FINDING AT OPERATION
			Duration of disease	Date of operation	
1	March 8, 1920	March 9, 1920	7 Days	March 15, 1920	Cell lining thickened, wide involvement, vascular, pus and bone destruction. Dura exposed.
2	March 10, 1920	March 15, 1920	10 Days	March 20, 1920	Cell lining thickened, wide involvement, vascular, pus, necrosis, para sinus abscess.
3	Feb. 26, 1920	Feb. 27, 1920	4 Days	March 1, 1920	Large amount of pus, wide involvement, vascular.
4	Feb. 28, 1920	Feb. 3, 1920	5 Days	March 3, 1920	Cell lining thickened, wide involvement, vascular, large amount of pus.
5	none	March 3, 1920	1 Day	March 3, 1920	Pus, vascular, slight thickening of cell lining.
6	Feb. 16, 1920	Feb. 19, 1920	6 Days	Feb. 22, 1920	Pus, vascular, cell lining thickened, marked destruction.
7	Jan. 30, 1920	Feb. 4, 1920	8 Days	Feb. 6, 1920	Pus, vascular, lining thickened.
8	Feb. 19, 1920	Feb. 21, 1920	5 Days	Feb. 24, 1920	Pus, vascular, lining thickened, wide involvement, slight bone destruction.
9	Feb. 17, 1920	Feb. 20, 1920	6 Days	Feb. 23, 1920	Pus, wide involvement, vascular, cell lining thickened.

tion are those which could only exist after a much longer period of involvement.

The late Dr. Holmes reports a case from his service at Camp Sherman operated seventy-two hours after the development of the acute otitis media in which there had been no previous ear trouble. The findings here were pus throughout the mastoid cells and the lining membrane was greatly thickened. In the tip cell the membrane was one-eighth of an inch thick. Although he did not in his report, mention the possibility of primary mastoiditis, it would be impossible for this thickening of the cell lining to take place within seventy-two hours.

Major Geo. Lathrope at Camp Shelby had 122 acute mastoids in 300 influenza-pneumonias. He mentions the apparent infection of both middle ear and mastoid at the same time. Operations done within forty-eight to seventy-two hours showed extensive cell involvement with necrosis and thick pus. He believes it to be due to a very virulent streptococcus but does not mention the likelihood of the blood or lymph stream as the channel of infection.

Lieutenant Mosher, in his "Observations in

Otolaryngology in the Army" concludes that the occurrence of mastoiditis depends upon the surroundings of the individual and the presence of a very virulent organism, such as the streptococcus or pneumococcus, and that the invasion of the mastoid occurs directly from the nasal pharynx through the ear or through the blood stream.

One interesting feature of his work is the finding of the haemolytic streptococci in 41.1 per cent. of all tissue cultures. This brings out the possibility of the streptococcus haemolyticus being present here, although we are not able to find it in the liquid pus.

F. P. Hill in reporting the results of his work at Fort Oglethorpe, during the first influenza epidemic, finds there was very little destruction of bone. That there was no early tenderness in cases complicating pneumonia, and only 1-3 of 1 per cent. of his ear cases developed mastoiditis. The infecting organism here must have been much less virulent than in our cases.

CONCLUSIONS

A study of these cases and a review of the lit-

erature point very strongly to a primary infection of the mastoid through the blood or lymph stream, with a very virulent form of streptococcus. And while we are aware of the occasional development of primary mastoid infection, the fre-

quent discovery of this condition during this epidemic marks it as a somewhat unusual occurrence and leads us to believe that primary mastoiditis is not such a rare condition as is usually supposed.

THE LIVINGSTON, 7TH & RACE STS.

The Treatment of Tuberculosis of the Knee Joint.

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Editor's Note.—In properly handling tuberculosis of the knee joint, it is essential in all cases, in which the least doubt exists of an accurate diagnosis, to rule out the possibility of all other confusing conditions, such as strains or sprains, traumatic synovitis, infectious and rheumatoid arthritis, gonorrhea and syphilis, Charcot's disease and sarcoma. While radical surgery is indicated for ending the condition in the shortest possible time in the adult with fixation of the joint in the most useful flexion, in childhood more conservative treatment is the discretion of valor. Immobilization and reduction of the existing deformity by gentle manipulation is the first step. The cure of the disease consists in destroying the function of the joint, and when indicated Hibb's operation seems to be the most logical to Dr. Kurlander as it provides both immobilization and bone grafting for this purpose. In addition to the treatment of the joint constitutional and hygienic considerations should not be overlooked.

KNEE joint tuberculosis constitutes about 20 to 25 per cent. of all cases of joint tuberculosis, the order of frequency being the spine, hip and knee.

Tuberculous disease is a locally destructive process and is as a rule confined to a single joint. This disease may be primary in the synovia or the articulating ends of the bone or the epiphysis in children. The English believe that tuberculosis is frequently primary in the shaft also, although in this country, Germany and elsewhere, tuberculosis of the shaft of the long bone is quite rare.

CONFUSING CONDITIONS

It is not the writer's intent to give a detailed differential diagnosis, but merely to mention those conditions which may be mistaken for tuberculosis of the knee joint.

1. Strains or sprains of the knee in childhood or adolescence is often followed by limp, pain and occasionally persistent flexion. The sudden onset and the rapid disappearance under treatment will differentiate this condition.

2. Synovitis of traumatic origin may persist for a long time and render the diagnosis doubtful because tuberculous infection may have followed the original injury. The persistency of a traumatic synovitis may be due to a fracture of the spine of the tibia, which latter condition was reported by the writer several years ago.

3. Infectious arthritis is of a very sudden onset attended by the usual local and constitutional manifestations of acute infection.

4. Rheumatism may be confined to a single joint, but its onset is sudden, there are constitutional disturbances, and after a time other joints become involved.

5. Arthritis due to gout or gonorrhea may simulate a tuberculous joint. More recently there has been described a form of tuberculosis of the

knee which sets in abruptly and in every way resembles an acute rheumatic arthritis affecting several joints and eventually all the affected joints with the exception of the knee, make a rapid recovery.

6. Syphilitic joint affections resemble tuberculous disease somewhat, but are rarely confined to a single joint. Here the Wassermann reaction is of assistance.

7. In arthritis deformans the symptoms are rather of the rheumatic type.

8. Charcot's disease of the knee joint is characterized by a sudden effusion and a rapid destruction of the joint, but the pain is slight and muscular spasm absent.

9. Sarcoma may be very difficult to differentiate even with the X-ray. The only point of difference being the more rapid destruction of bone than that which usually accompanies tuberculous disease.

TREATMENT

In children there seems to be a more marked resistance to the disease than in adults and cures with only slight disturbances of function often result when continuous immobilization and protection, together with a vigorous anti-tuberculous regime are instituted. It is with this consideration in mind that the treatment of knee joint tuberculosis in childhood should be entirely conservative; operative interference being simply incidental to protective treatment. While a radical operation cures in a much shorter time, it removes the possibility of cure with motion. The removal of a portion of the epiphysis or epiphyseal cartilages interferes with growth of the limb with resulting shortening and furthermore, unless the limb is protected by mechanical means, deformity is the rule even though the disease has been thoroughly removed. In adult life, on the

other hand, the radical removal of the disease may be indicated as a primary measure. The routine treatment in childhood consists of fixation and protection from motion, weight bearing, muscular spasm and contraction.

Reduction of deformity is the first step in the treatment. In apparently recent cases, the deformity is usually due to muscle spasm and the deformity may be rapidly overcome by fixation and placing the joint at rest. Fixation is easily accomplished by the application of a plaster of Paris cast extending from the groin to the ankle, or better still, by a spica including the pelvis and extending to the toes. Flexion deformity due to muscle spasm may be overcome even more rapidly by moderate and gentle traction.

If the deformity is of longer standing and more resistant, Whitman, of New York, attempts reduction under anaesthesia, and in those resistant cases, especially when accompanied by backward subluxation of the tibia, he institutes the following method of correction, which is known as *reverse leverage*. The patient is anaesthetized and placed face downward on the table with the feet projecting over the end. The body of the patient is elevated by pillows until the tibia lies evenly on the anterior surface of the table. The head of the tibia is then held firmly on the table and the assistant exerts gradual downward pressure on the thigh. As the contractures give way the pillows are removed. Usually the deformity may be reduced at one sitting, but if very resistant complete correction is not to be attempted until a week later. Adhesive plaster strips for traction and a close fitting plaster bandage are applied. The patient rests in bed with traction for a time, and then the ordinary Thomas brace is applied. If the contraction is of long standing a preliminary open division of the flexor tendons is advisable.

To the writer, this method of forcibly correcting long standing and resistant deformity is absolutely contra-indicated and exceedingly dangerous, as manipulation of an acute tuberculous joint may lead to the rapid development of tuberculous meningitis.

Mechanical treatment.—An efficient mechanical appliance during the acute state is the Thomas knee brace. This consists of two lateral uprights which support the leg on either side terminating below the foot in a cross bar shod with leather or rubber, which serves as a stilt and above is a padded ring that fits the upper extremity of the thigh and supports the weight of the body. By means of adhesive plaster strips reaching from the knee to a windless attached to the foot piece the amount of traction can be regulated. During the active stage, the brace must be worn day and night. When the stage of recovery is well advanced the brace may be discarded at night, traction discontinued, weight may be gradually borne and slight motion of the knee permitted.

The most efficient method of treatment is fixa-

tion, traction and immobilization, as accorded by the application of the long plaster of Paris cast. This usually extends from the groin to the ankle, but in very painful cases, extreme immobilization may be assured if a long plaster spica is applied. This is changed as often as necessary, and the writer permits weight bearing as early as the patient's freedom from pain will permit.

Abscess is present as a complication in about one-third of the cases and conservative treatment should be applied. Should the abscess become larger and cause disturbance it should be aspirated.

Operative treatment.—As, in exceptional cases, the disease is progressive and shows no tendency toward recovery and if an infected abscess communicating with the joint makes efficient drainage difficult, arthrectomy may be indicated. The joint is opened either by a lateral incision or by an anterior incision passing below the patella, all the diseased tissues are removed and the foci in the bone evacuated with a chisel and curette. The joint is then closed with or without drainage as may be indicated. The process of repair is thus hastened and ankylosis is usually the rule. This operation has the advantage over excision in that less bone is removed and the epiphyses at least or in part remaining, thus the ultimate shortening is less than after excision. Arthrectomy in childhood results in 85 per cent. of cures as far as the local disease is concerned. Adults do not possess the reparative and resistive elements to the disease as do children. While the disease may often become quiescent under complete and prolonged fixation, nevertheless, these apparently healed joints light up when subjected to use without protection, and the disease advances, the history extending over a period of years.

Ely has shown that joint tuberculosis exists only in the red bone marrow and synovia. If function is destroyed, as by an ankylosing operation, the red marrow and synovia will disappear as well as the disease. Therefore, the conservative treatment in adults is to be discarded in favor of the operative treatment.

Resection of the knee.—This operation is not performed during childhood, because of the great amount of shortening that follows complete removal of the epiphyses. Early resection in adults will assure a cure of the disease in a short time, and will assure a firm and sturdy support. It may be stated that a case of knee joint tuberculosis in an adult whether the process involves the synovia or the bone will almost never result in complete cure without operative interference of some kind. If the synovia alone is involved, Brackett recommends that the joint be aspirated followed by an injection of from one to five ounces of a 4 per cent. iodoform-olive oil emulsion. This may be repeated several times as necessary. Complete immobilization must be maintained.

Of the few cases that seem cured by this treat-

ment, many subsequently progress, infecting the bone and then resection becomes imperative. Where the focus is primary in the bone, resection should be done. The knee should be protected from weight bearing and immobilized in a brace or cast for about a month previous to the resection. The object of this preliminary period of absolute rest is to reduce the acuteness of the disease.

Technic of the Operation of Resection of the Knee.—The operation is preferably done under the Esmarch tourniquet. The classical method consists of a U incision below the patella extending from condyle to condyle, dividing the patellar tendon and opening of the joint. All the diseased tissues including the patella and capsule are cut away. A very thorough dissection is made down to the posterior capsule. Sections of the femur and tibia are removed down to healthy bone. The bones should then be approximated and fixed by strong catgut sutures passed through the anterior opposed surfaces of the femur and tibia. The vessels are ligated and the wound closed with or without drainage, as the case may be, and a plaster of Paris cast applied, holding the knee in complete immobilization for several months until union is firm.

Osgood, of Boston, operates in the same manner, except that he uses steel plates in most of his cases to secure apposition and fixation. In most cases the plates are subsequently removed. In persons whose occupations are sedentary, Osgood fixes the knee joint in 40 degrees flexion. In persons whose occupations are ambulatory in character, 20 degrees of flexion is maintained.

The writer has had the privilege of working with R. H. Hibbs in his clinic at the New York Orthopaedic Dispensary and Hospital, and has seen many excellent results following resection of the knee, according to Hibb's technique, which is as follows: An anterior incision is made from condyle to condyle, dividing the patellar tendon and opening the joint. The patella together with the upper flap is reflected upward and the lower flap downward. The periosteum over the head of the tibia is divided and retracted downward. The crucial ligaments together with the cartilages, if still present, are removed. The patella is then shelled out of its periosteum and placed in a bed which is chiselled out between the tibia and femur. The patella is tightly wedged in this bed between the tibia and femur and acts both as a bone graft to stimulate the production of new bone, and to produce a perfect immobilization. Hibbs does not attempt dissection of the diseased tissues as most other operators do. He closes the joint without drainage. The knee is placed in a plaster Paris spica extending down to the toes, holding the knee at about 15 or 20 degrees flexion. Firm bony union is usually present and weight bearing allowed at three months.

Albee's technique is similar, except that he inserts a tibial bone graft in a groove cut in the

lower end of the femur and upper end of the tibia.

The results of resection of the knee, give at least 90 per cent cures.

Amputation is to be considered only as a life saving measure, especially when there is visceral tuberculosis and amyloid degeneration as well.

As regards operative relief of deformity in an attitude of marked flexion, where there is bony ankylosis, the limb may be straightened by a linear osteotomy or in severe cases, by a cuneiform osteotomy. In children the linear osteotomy is to be preferred as no bone is removed. In adults the cuneiform osteotomy is preferred.

SUMMARY

1. In childhood the treatment is mainly conservative.

2. In adults the treatment should always be operative as it shortens the disease and results in a speedy cure.

3. Immobilization and reduction of deformity is the first step in the treatment, but all manipulation must be exceedingly gentle.

4. Destroy the function of a joint and you cure the disease.

5. Hibbs' operation seems the most logical as it provides immobilization and bone grafting in one.

6. In addition to the treatment of the joint, constitutional and hygienic considerations should not be overlooked.

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Vaccines for Common Colds—There is no scientific evidence that common colds can be prevented by the use of vaccines, despite the glowing recommendations of vaccine makers and the patter of the detail man. Colds characterized by catarrhal inflammation of the mucous membranes of the nose and the throat are caused by various organisms. The organism concerned in one epidemic is different from that in another. It is impossible to anticipate what organism is about to invade the household or community. Inoculation of mixed vaccines fails to produce immunity. (*Jour. A. M. A.*, Nov. 13, 1920, p. 1361.)

More Truth About Saccharin.—It has been asserted that ingestion of saccharin increases the catalase content of the blood; that catalase increases oxidation in the animal organism, and hence that the use of saccharin by diabetics might be of value. However, the alleged content of catalase remains improbable and unproved. Further, recent investigations show that administration of saccharin, even in huge amounts, does not increase oxidation in the animal body. Saccharin is neither a food nor a potent drug. Its usefulness in dietotherapy is limited to the function of taste. (*Jour. A. M. A.*, Nov. 13, 1920, p. 1347).

A Plea for Better Obstetrics.*

L. R. Fast, M. D., Paulding, Ohio

Editor's Note.—Apparently there is still a conviction in the minds of some that labor is so normal a process that it can be handed over to registered midwives with safety to the childbearing mothers and their unborn babes. While the incidence of sepsis is reported as much less in the labors handled by midwives this is only because their good results are counted, whereas their complications are credited to the consultants. However there is no doubt that obstetrics has been and still is a neglected phase of the practice and teaching of medicine. It is utterly surprising how slow a profession can be in apprenticing its students in some of its most vital work. Perhaps, as Dr. Fast hopes, if the public learns that obstetrical standards have been neglected then prospective mothers and fathers of the coming generation will seek better service and better obstetrics will come into its own and will bring a remuneration in keeping with its importance and value.

IN order to make any worth-while deductions we must look into the history of this particular branch of medicine. Let us take a retrospective view and see what the past holds for us; examine the present status and if possible profit by the failures and successes of the early practitioners.

STATISTICAL DATA

By reason of the defects in statistics of this country it will be necessary to cite some that have been gathered in Europe by Dr. Alexander Stookes and Dr. Hope of Edinburgh.

That we have a right to make this plea, we ask your indulgence, in offering the following statistics and references.

We wish to present to the society the changes which have taken place, and especially those which are now going on; changes not so much in technical points, which are more suitable for presentation at a meeting of specialists, but changes affecting the community and our profession as a whole.

Obstetrics has always been the Cinderella of the medical profession. It was, not over a century ago, considered a branch of the profession hardly respectable. The College of Physicians of London prior to 1890 excluded Practitioners of Midwifery from their Fellowship. The College of Surgeons would not allow such persons to sit on its councils until 1828. It was as late as 1886 that practitioners were required to qualify in obstetrics as well as in medicine and surgery, and but few colleges at this time, in this country, included obstetrics in their curriculum.

In Liverpool the practice of obstetrics is passing into the hands of midwives almost entirely.

This condition has been brought about by reason of there having been passed in 1902, a Midwife's Act. This Act made it compulsory upon all those desiring to practice midwifery to register, after having taken the *intensive* and *prescribed* course. The showing upon the part of the midwives, by reason of being compelled to take this training, is a most striking argument in favor of our colleges urging,—I should day insisting,

upon the newly graduate, the proper instructions making it as intensive as that of medicine and surgery, or some one of the laboratory courses.

A recent paper read by Dr. Alexander Stookes at the Liverpool Medical Institute under date of November 21, 1919, says, "*When we turn to the Registrar-General's Statistics for the past fifty years we find there is little if any less risk for women in childbirth today than there was in 1850.*" Such a statement and coming from such a source, is staggering and when once reaches the ear of the public, we shall stand indicted by the court of public opinion, and we will have to do some keen explaining to clear ourselves. He further states that the fall in mortality from causes other than sepsis has extended through five decades, whereas that from sepsis dates only from 1881-1890. Over the whole period the fall from non-septic causes is greater than that from sepsis. Dr. Hope, the Medical Officer of Health of Great Britain, says that out of 17,133 births it looks as though the doctors have four times as much sepsis in the women they attend as do the midwives, and it is not only in Liverpool that the advantage rests with the midwives.

In a paper read before the American Association of Obstetricians and Gynecologists, at Newark, N. J., in 1919, the figures for midwives were much better than for the doctors.

If the puerperal death rate from sepsis has shown such a marked decrease since the advent of the well-trained and supervised midwife of England, as is shown by Dr. Hope's report of some 17,000 cases; how much further might this death rate be reduced by applying the same rule to the graduate physician. It is perfectly obvious that such would be the fact; death from other causes would still be reduced and the art of obstetrics and gynecology be placed along the side of her sister sciences; pre-natal and infant welfare would come in for its share of good, not alone to mother and infant but to the expectant public, as is cited in a fiery speech delivered by DeLee last November, before the American Association for the Study and Prevention of Infant Mortality.

THE NEGLECT OF OBSTETRICAL STANDARDS

It is not my purpose to present this subject

*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.

without calling your attention to some of the ups and downs in practicing obstetrics,—some of the more common sense reasons for not having better obstetrics.

I think it is generally understood that both the teaching and practice of obstetrics are regarded as the most neglected of all the clinical branches of medicine, the weakest page in the whole medical curriculum, and the least desirable part of the general practice of medicine.

For this state of affairs there must be a reason. The standard of obstetrical practice is low. Why, in this age of greatest advancement in the science and art of medicine as a whole, should one branch lag so far behind?

In seeking an answer to this question it will be necessary to recall conditions as they now exist. In the commercial world demand determines the quality and value of supply. In the practice of obstetrics, to a very large extent, this is equally true. Demand determines the quality and value of medical service. The obstetrical standard, in other words, is just what American women and their husbands demand, and nothing more. The lay public is still allowed to believe, what they have been believing since the beginning of human history, that childbearing is a normal physiological process identical in the "Countess and the Cow"; that it requires neither special care on the part of the prospective mother nor skill on the part of the doctor, and that 95 per cent. of the pregnancies and labors terminate normally when left to nature. This erroneous popular idea is one of the very fundamental causes of our present poor standard of obstetrics practice.

JUDICIOUS PUBLICITY

This idea should be corrected and the lay public taught the true facts, viz.: *That it is a normal function dangerous to public health.* Evidently the public is not yet aroused to the importance of this critical period of human life. To arouse the public to action is our specific task.

We gather in our association meetings and discuss problems of prenatal care, better obstetrics, intelligent preparation for motherhood, and the very people who would be most benefited by these discussions, mothers and mothers-to-be, are barred from these meetings. Our discussions appear in the medical journals, but the public does not read medical journals. Do not misunderstand me. I do not mean that our professional meetings should be handled differently. I am simply stating facts.

In order to separate ourselves from the kind of work done by the midwives, and in some localities, our blessed or wise old woman, we must lift the curtain that separates the doctor and his work and let the public take a peep.

The doctor with his stove-pipe hat and little black bag must be dedicated to the past. Let us by fair methods and by the lay-press teach the expectant mothers of the nation.

THE NEW ART OF OBSTETRICAL SURGERY

Obstetrics is fast becoming a surgical science, and I wish to make an appeal—what we need is to learn what can be done or should be done so as to cause as little trauma to the mother and child as is possible and consistent with the art of obstetrical surgery.

We have long given up the idea of practicing *watchful waiting*, or even the indulgence in midnight prayer, asking that we may have good luck. What we need is time spent in trying to standardize this work. Our duty to the patient and all concerned, with due respect to present cleanliness, will eliminate some of this unsettled state into which this branch has been allowed to slumber. Just recently, I was horrified to observe this kind of work being done under ordinary bedding. I possibly would have a better obstetrical practice if I could hitch up my conscience to do likewise and especially in this particular neighborhood.

I said standardize the practice: Why so much difference in opinion? We have the obstetrics of private practice and that of the hospital and maternity homes. One class of physicians says do this, while the other says do thus and so.

To note the changes and differences of opinions we have only to read the various views of our superiors in this line of work.

Dr. Balantyne gives the following summary of facts involved in Infant Mortality:

1. The antenatal factor, determined by the placenta.
2. The intranatal factor, or injuries in childbirth.
3. The postnatal factor, or the germ laden environment.
4. A complexity of causes, including malformations.

We think no one can avoid concluding that there is a rapidly increasing call for hospitalization of our confinement cases. Sepsis, in cases dealt with entirely in hospitals and lying-in-homes, has almost disappeared. There can be no doubt that we are now saving many lives both for mothers and children by the increased possibilities of abdominal surgery. The factors in the summary given by Dr. Balantyne point to no better route, unless we are still content to keep in hiding, and practice this art on the same grounds of the midwives, as in the past.

EXTENSION OF CAESAREAN SECTION

Every year Caesarean section is increasingly resorted to, and its field extends. At the beginning of this period it was limited to cases which could not possibly be delivered any other way, and for some time, only for extreme deformity was it considered a justifiable operation. At the present it is considered a justifiable procedure;

1. In rupture of the uterus for concealed accidental haemorrhage.
2. For placenta previa.

3. For malformations and contracted outlet.
4. For eclampsia and for causes in which renal diseases have caused oedema and threatened eclampsia.

CONCLUSIONS

There can be no greater loss to the country than by carelessness in obstetrical work.

No loss is so sad as the death of a young mother, and still further, even short of death, the injuries and incapacities inflicted on women in child-birth, and on the children themselves is a matter of more urgent consideration.

It is in just such cases do we need quick action, and until some of the mooted questions are cleared and this art standardized so that the doctor will know if he should use pituitrin, use forceps, stay all night or send for a midwife,—will we feel free to exercise our prerogative.

Let us definitely fix the duty of a general practitioner in an ordinary case; the duty of the

obstetrical surgeon who is especially qualified in this kind of work, in the extraordinary case, and by so doing acquit ourselves in the eyes of the public and be able to receive a compensation commensurate with services rendered, thus raising the standard of obstetrical work to a place that will as far transcend that of the past or present as the rising sun exceeds the mellow glow of a moonlit night.

In conclusion let me state (1) that the results of obstetrical practice remain unsatisfactory. The death rate from child-birth, largely preventable, remains too high. Too many injuries follow; too many children are lost and injured.

(2) Adequate and complete training in obstetrical practice for all medical students is urged.

(3) Adequate and definite methods are needed for educating the lay-public, so that they may know the worth of a well trained physician over that of a pseudo-obstetrician.

The Care of the Pregnant Woman.*

Wm. D. Fullerton, M. D., F. A. C. S., Cleveland

Editor's Note.—If every pregnant woman could be given the care that Dr. Fullerton outlines in detail, the birth statistics of the country could be vastly improved and much sorrow and suffering could be avoided. There is a diplomatic way of handling the women who seek abortion and Dr. Fullerton suggests the line of procedure. For the mother who wants her child he emphasizes the value of a complete history as well as a thorough physical examination. Most mothers will cooperate during pregnancy in the matter of diet, dress, exercise and attention to the bowels and kidneys if only given proper instruction. It is easier to anticipate toxæmias with urinary and blood pressure findings than to treat them when in full blast. Occasionally serial abortions or miscarriages will indicate their own therapy. The obstetrician is most wise and discreet who finds out the capacity of his patient's birth canal and the position and condition of the unborn child before labor begins. It is then that breech, face and transverse presentation are best transformed to cephalic, if possible.

IN attempting to discuss with you the course of this ten months' period, filled as it is with such a complexity of incidents, and subject to such a multiplicity of accidents, it must be quite apparent that only the more common and important topics may be included.

PREVENTING ABORTION

Whether women are less willing to accept the cares and responsibilities of motherhood, or are finding themselves less able to pass the acid (H. C. L.) test, may be subject to discussion. However, an increasing number are presenting themselves to us with a history of amenorrhea and demanding or imploring that we help them out of their real or imagined difficulty. Here in this early or uncertain stage begin our professional duties. To haughtily dismiss these self-styled unfortunates, registering insult and indignation that we should have been approached with such a request, is not to "carry on" in our profession. The fact that we have been approached should rather be considered a compli-

ment, for have not these women confessed and appealed to us in their hour of imagined need, and who, unless one of us, is going to have such a golden opportunity to set aright these distracted women, or render such service to humanity?

Fundamentally a woman seeking an abortion is selfish, and the best results are had by appealing to her on these grounds. Tactfully, though with positiveness, she should have explained the great danger to herself, of submitting to criminal abortion—danger both immediate and remote, occasioned by infection, resulting in peritonitis and death, or chronic invalidism with prolonged suffering, repeated operative procedures, and probable un-sexing. The religious and moral aspects are often advantageous lines of argument, as is the dependency of her children if she has any upon the mother's care.

When these rebellious women, as also those who are resigned or delighted with the possibility of their condition, present themselves the first thing, after a thorough history is taken, is to determine whether they are pregnant. If so, and they seek abortion, we need not be too positive of the pregnancy. Appeal to them along the above

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lines and request their return after two weeks. Even though determined at the time to seek abortion, they realize the needless risk unless pregnancy is certain, and will therefore usually defer action until seen again. During this time they give your words much consideration, and with few exceptions will continue their pregnancy, and remain everlastingly grateful to you for your wisdom and kind advice.

HISTORY TAKING

The past history of the pregnant woman should be carefully recorded, particularly with reference to pulmonary and cardiac conditions. The disastrous effects of pregnancy in those with tuberculosis, as well as those with unstable or failing cardiac compensation, are so well known that the possibility of these conditions demand most careful observation.

In active tuberculosis the pregnancy should be terminated as early as possible, before the sixth month. With more advanced pregnancy there is little to be gained by termination, as the procedure is about equally as injurious as the continuation of the pregnancy, providing every means to spare the mother is taken at the time of delivery.

In cardiac pathology, principal attention is to be directed to compensation. The mere presence of murmurs is not occasion for particular alarm, but a broken or failing compensation which resists treatment is a complication of greatest importance, and warrants abortion, unless a viable child may be obtained shortly, in which case the woman may be carried along, and then delivered by whatever means will spare her to the greatest extent.

Your patient should be questioned regarding past conditions, giving rise to renal insufficiency, such as tonsillitis, scarlet fever, or other infections.

If the woman has a past obstetrical history, the following should be noted: The number of children and their ages, length and character of labors; weight of children and puerperial convalescence. Abortions, number, character, at what stage of the pregnancy; stillbirth or living child, and if possible cause of the abortion. From the above carefully noted, much information of practical prognostic value can be gained, and often we may be placed on guard against a repeated difficulty.

The venereal history is of the greatest importance. With tact, the desired information may be secured without offending the patient. It is to be remembered that women are frequently unaware of a syphilitic infection, due to unnoticed early signs and symptoms. Repeated abortions, stillbirths and short-lived children are all very suggestive of lues, and in such cases, as well as when any signs or other history is obtainable of this disease, a Wassermann test should be made. It

is indeed desirable for such a test in every case, irrespective of history or negative findings. The usual symptoms of gonorrhea should be inquired for, especially in recently married women.

PHYSICAL EXAMINATION

The history taking is to be followed by a complete physical examination, in which the posture, general nutrition and glandular systems are to be noted. The neurological examination includes principally the reflexes. The heart and lungs are carefully noted and the findings recorded.

A careful pelvic examination should always be made as early in pregnancy as possible. The presence of any leucorrheal discharge should be noted and smears taken from the urethra after stripping, and from the cervix for gonococci. Should the woman be found to be infected, vigorous treatment is instituted to clear up the condition before labor, and special precautions taken at that time in prophylactic measures against infection of the child's eyes.

The condition of the perineum and cervix is recorded, as well as any gross pelvic deformity or contractions, particularly a false sacral promontory or unusually prominent ischial spines.

DIAGNOSIS OF PREGNANCY

The diagnosis of pregnancy is sometimes difficult to make, especially in the early stages. After the third month there is seldom much difficulty, but prior to the sixth week, a diagnosis is always uncertain. The history of amenorrhea, one or more periods having been missed, is very suggestive evidence, though it must be remembered that a few cases menstruate for one or more months after conception, and also that amenorrhea is often due to causes other than pregnancy.

Early pregnancy is often accompanied by a hypertrophy of the breasts noticeable to the patient, who frequently speaks of a tingling sensation, and the feeling of weight in them, and remarks of the areolar change. Fluid may often be expressed, though one should remember this is common in many pelvic conditions.

The bluish discoloration of the anterior vaginal wall is often seen early. The cervix is slightly softened, and this softening is first made out in the vaginal portion. With increased force the pulsations of the uterine arteries are easily felt on either side of the cervix. The anterior-posterior diameter of the uterus first increases. It then becomes broader and gradually globular in form. Softening occurs early at the junction of the cervix and fundus, and is easily made out on bimanual examination. In the early weeks a symmetrical enlargement is common, and must not be mistaken for uterine tumor. By the end of the third month the fundus can be felt from above the symphysis; the fourth month one-third of the way to the umbilicus; the fifth month two-thirds of this distance, and the sixth month the height

of the fundus is on a level with the umbilicus. The foetal heart can usually be heard by the fifth month.

A variable degree of nausea appears in the majority of cases about the sixth week, and is more or less annoying for the subsequent three months. The anteflexed enlarging uterus encroaches upon the bladder, and by diminishing its capacity occasions more frequent urination, which is observed usually by the sixth to the eighth week. Posterior positions of the uterus lead to incarceration, are etiological in some cases of vomiting, frequently the cause of constipation, and often of abortion. Therefore, if, at the time of pelvic examination for diagnosis, the uterus is found in a posterior position, it should be gotten forward and a Smith-Hodge pessary used to hold it so until it becomes so large that posterior displacement is impossible. Anesthesia may be required for such a manipulation, and is indicated if the accomplishment is otherwise impossible.

CARE DURING PREGNANCY

Pregnant women are most efficiently and easiest cared for through intelligent cooperation. It is my practice to recommend their reading instructive, appropriate literature such as Holt's "Care of the Baby," and Slemons' "Expectant Mother," or some of the several Public Health Bulletins on Prenatal Care. They may in this way become acquainted with their condition in a very satisfactory manner, and have all the common symptoms and conditions explained for themselves and babies. The necessary supplies for their labor and care of the baby are specified. This saves countless conversations with their physicians, and enables these women to cooperate in the care of themselves.

Diet.—The food intake should at all times be ample, but not excessive. Either from the first, or after the first month, meats are limited to once a day and should be well cooked. Free vegetable and fruit intake is encouraged. Not less than two quarts of liquid should be taken every day, and milk, if agreeable, may make up one quart. The child's weight can only be slightly modified, if at all, through diet, and I usually ignore this consideration.

Dress.—The clothing should permit free movement of the body, and not constrict. Circular garters are prohibited on account of stasis. After the fourth or fifth month, a properly fitted maternity corset is most comfortable. The breasts, if large, should be supported but not constricted. Low or very moderate heels keep the axis of the body weight centralized, and the woman does not have to walk with her shoulders thrown far backward to maintain her balance, thereby avoiding frequent backache, so often encountered. She also avoids falling accidents, due to catching of high heels when she becomes unavoidably awkward.

Exercise.—The pregnant woman should have daily physical exercise, which should never be

violent, and always stopped before tiring. Outdoor walking, up to several miles at a time, depending upon her endurance is the exercise *par excellence*. It is sufficient to promote deep breathing, strengthens the legs and abdominal muscles, stimulates skin excretion, helps regulate the bowels, and I have never found it to be injurious. Even in the early months tennis, horse-back riding and swimming are contra-indicated, as is also riding in automobiles to any extent. I see many miscarriages caused by this latter violence. The shock and jarring incurred by riding, especially in small cars over the average road or street is not tolerated by a great many pregnant uteri. Even if miscarriage is avoided, much discomfort, backache and dragging pains in the lower abdomen are often experienced. There is but little if any physical advantage to the individual in such form of recreation and if indulged in at all, it should be very limited and taken with the greatest care.

A daily warm shower or tub bath is desired up to two weeks of term, after which a shower or sponge should be used, avoiding the possible introduction of foreign organisms into the vagina.

Bowels.—Constipation is very common, progressively so during pregnancy. Since free elimination is imperative, the condition demands our strict attention, and a movement every day is essential. Going to stool at a specified time every day, best immediately after breakfast, is very important. A diet rich in coarse vegetables and fruits, is often satisfactory. Agar Agar or petroleum oil are useful. Cascara and licorice powder or Lapactic pills may be used if necessary, and lastly one resorts to enemata. Drugs are never to be used if avoidable, and with careful direction and effort may usually be dispensed with.

Urine.—Since the various toxæmias are almost invariably announced by urinary findings, a regular and frequent examination of the urine is imperative. During the first six months, once a month; every two weeks during the next two months, and every week from the eighth month until delivery. If at any time abnormal findings are discovered, the frequency of examinations is increased, depending upon the character of the findings.

The first specimen should be catheterized or collected after careful discharge. Albumen, casts, sugar, etc., should be sought for and certainly in the suspicious cases, if not in all cases, a functional test with phenolsulphonethalein should be made. Casts are at all times abnormal findings. A very faint trace of albumen may be vaginal contamination. Any greater amount, and especially if it progressively increases, is to be regarded with grave apprehension of impending trouble. Dextrose will be found in urine of pregnant diabetics. Lactose is not uncommon and is of no significance. It should always be differentiated.

Diabetes is not by the best authorities considered a cause for the termination of a pregnancy, since neither the disease or the pregnancy are particularly affected one by the other.

Blood Pressure.—The blood pressure has been found to be of great assistance in detecting impending toxæmia, and its behavior in toxæmia of valuable prognostic assistance. The blood pressure should be taken equally as often as the urine examinations are made in normal cases, and at least daily in toxic cases.

The systolic pressure of normal pregnant women, irrespective of age or multiplicity, varies from 100 to 120 and averages about 115 millimeters of mercury. A pressure which is found elevated and constant is of less significance than one gradually increasing. If rising above 150 millimeters of mercury, it is to be watched with the greatest apprehension, irrespective of other symptoms of toxæmia, such as oedema, especially of the face and hands, dizzy attacks, specks before the eyes, etc. A rise in blood pressure even above the danger point may occur while the urine is negative and it is usual for the rise in blood pressure to precede the abnormal urinary findings.

Toxæmia.—This is not the place to go into detail to differentiate the various toxæmias. Let us consider only three, and these briefly, namely, vomiting, nephritic and eclamptic, the latter two being so similar in symptoms and treatment that they may be discussed together.

The ordinary vomiting of pregnancy, already referred to, is rarely severe. Decreasing the liquid intake, selecting a dry diet, especially in the mornings, with the necessary fluids taken in small amounts at frequent intervals is most helpful. A hard dry cracker before rising is often of help, as is also coffee or tea without cream or sugar. Frequent small meals are preferable to one or two large ones. None of the usual drugs are dependable, excepting *Corpus Luteum* extract. This must be given hypodermically, an ampoule at a dose. If possible, and if the vomiting be severe, two injections are given daily for a week if necessary. In the milder cases once a day suffices. With lessening of the vomiting the injections are given every other, then every third day. Usually within ten days or two weeks, with from six to fifteen injections the patients are either entirely well or so improved as to no longer bother with the treatment. This treatment has been of very material help to me as 90 per cent. of cases are greatly relieved.

The toxæmias can only be outlined. When the symptoms already mentioned present themselves, we should at once start with means of free elimination. Rest in bed, even for threatened cases, is demanded. Meats and eggs should at once be taken from the diet, allowing vegetables and fish, unless the symptoms are marked, in which case a milk diet alone is essential. The bowels should move freely every day, and a saline cathartic

every morning is desirable. In severe cases colon irrigations every eight hours of from three to four gallons of 1 per cent. soda solution should be given. Hot packs and sweat baths are desirable if the symptoms are severe.

If the symptoms abate, the treatment is gradually reduced and the patient very cautiously returned to normal existence, preferably with meat and eggs permanently eliminated from her diet. Such cases must be under almost daily observation for a possible and not infrequent return of their trouble.

In case the toxic symptoms do not abate or disappear on treatment, but on the contrary progress, termination of pregnancy is necessary. This is usually best and most safely accomplished by inducing labor by means of bags, and allowing the patient to deliver herself. If convulsions have occurred termination is almost always advisable. To control the convulsions large doses of morphine should be given as well as chloral by rectum at the same time, and induction started along with the prescribed treatment. This conservative treatment gives much better results in the otherwise normal cases than the radical treatment with section, which is only countenanced in the rare case, usually a nullipara with a small pelvis, very rigid cervix or other conditions warranting section.

Abortion.—At least one-third of all conceptions which take place end in spontaneous abortion. Many of these are at an early period, the first few weeks, and go unrecognized by patient and physician. Mall has shown that fully one-half the fetuses spontaneously aborted possess physical defects incompatible with their further normal development. Considering such facts, it is something of a question of how far we are justified in attempting to prevent an abortion which has no evident etiology, as we may make ourselves responsible for the further development of monsters.

The usual evidence of impending abortion is pain, more or less regular and cramp-like, limited to the lower abdomen, for which there is no other apparent cause. More or less bleeding is common and it may be very free. If the symptoms are not marked, and the abortion only threatened, the woman should be kept at absolute rest in bed, and opium and belladonna suppositories used freely. No douches and no cathartics are to be given.

If the accident be inevitable, as denoted by a dilated cervix and presenting membranes, or incomplete, the uterus is best immediately and thoroughly cleaned out. The strictest aseptic technique is essential. The cervix should be dilated to admit a gloved finger, and the contents freed from the wall, then lifted out with placental forceps, the cavity swabbed with tincture of iodine, and a light packing introduced, which is removed the following day.

ANTE-PARTUM EXAMINATION

One month before the expected date of delivery,

the patient must present herself for examination. At this time the pelvis is most carefully measured, and the findings recorded. Not only are the external measurements taken, but the diagonal conjugate is measured and the true conjugate estimated. The pelvic outlet should be carefully measured for otherwise many funnel pelvises will escape notice until labor has well advanced. The sacral promontory is palpated and a false promontory sought for. The ischial spines are felt, and any encroachment on the pelvic canal noted. The mobility of the coccyx is also noted. The position and foetal presentation is made out, and if the head be not engaged its adaptability is estimated by gently but firmly forcing the head into the pelvic inlet. Breech, face and transverse presentations are transformed to cephalic, if possible. The rate and position of the foetal heart or hearts is recorded.

The breasts are examined with especial reference to the nipples, which, if inverted, may be helped by wearing of wooden nipple shields. The patient is directed to bathe the nipples twice daily with a 50 per cent. alcoholic solution saturated

with boric acid, and every other day to gently massage and make traction on them, using cold cream, albolene or some other lubricant. The nipples will, with this care, be softened and toughened and be less tender and less apt to crack with subsequent difficulties, when nursing begins.

The lungs and the heart in particular should be again examined to see that no change has taken place since first examined. At this time the patient is reassured that she will have a normal labor and that everything has and will be done to avoid complications, and minimize her discomfort. She is given final instructions for her preparations for labor, and the signs and symptoms of labor's onset are explained. She is directed as to when to notify you, which should be as early as possible in labor, that you may plan your day accordingly.

The consideration of the management of normal and abnormal labor and care during the puerperium, with all its interesting physiology and pathology must be deferred until a later date.

ROSE BUILDING.

A Contribution to the Use of Local Anaesthesia in Major Surgery.*

Desider Folds, M. D., Cleveland

Editor's Note.—Most will agree with Dr. Folds' plea that the art of using local anaesthesia should be taught in all medical schools and teaching clinics. It has so many possibilities that are being rapidly developed; it is in so many cases life-saving and the method of choice, that its use should be far more prevalent. Perhaps post-graduate instruction is even more needed so that surgeons who have not yet employed the method may become familiar with it to the advantage of all concerned. With the use of colored solutions all methods of infiltration and blocking may be demonstrated on the cadaver. However, those who wish to use local anaesthesia successfully must become expert surgical anatomists as well as velvet-touch operators.

SURGERY is indebted to the use of novocaine and adrenaline as a local anaesthetic for much of its progress in recent years. Not only has this anaesthetic done less harm than any other, but it has compelled the surgeon to improve his technique, to employ sharp dissection, to avoid traumatizing the tissues and has thus removed many of the operative factors injurious to the patient. Any method which helps to reduce the danger of an operation deserves the enthusiastic support of the profession.

Nitrous oxide and oxygen is probably the safest general anaesthetic when administered by a specially trained anaesthetist, but it is very expensive. With this, as well as with all other general anaesthetics, the surgeon is dependent on his anaesthetist. If it happens that the operator has not complete confidence in the anaesthetist his attention is fluctuating between the operation and the condition of the patient. The same occurs when the surgeon must instruct his anaesthetist

as to the depth of anaesthesia, or when the patient presses or vomits.

With local anaesthesia the surgeon controls everything. His mind is not distracted, he can prepare the solution anywhere and at any time and he is sure it is always the same and harmless.

PREPARATION OF THE SOLUTION

In 1912 Hoffman and Kochmann discovered that the anaesthetic effect of novocaine was increased by the addition of potassium sulphate.* Braun, in 1913, confirmed this and advised the use of the following solution, which I have used ever since:

Sodium chloride	Gram 7.0
Potassium sulphate	Gram 4.0
Distilled water	1000 c. c.
Dil. Hydrochloric acid	Minims II.

This solution is sterilized and when ready for use the amount needed at the operation is poured into a porcelain container. A few c. c. of this solution is poured into a small porcelain dish, the novocaine adrenaline tablets dissolved and boiled in this over a flame. After boiling this is poured

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*T. Sollman found that local anaesthetics combined with potassium sulphate show simple summation, but no potentiation.

back into the larger porcelain dish. It is very important that the solution should be prepared and kept in a porcelain dish or alkali free glass and the hydrochloric acid added to the solution, as already mentioned, otherwise the adrenaline decomposes, as is seen by its red and later brown color. According to Braun toxic effects are the result of improper preparation of the solution.

It is true of any local anaesthetic that the less the concentration the greater the number of c.c. necessary to reach a lethal dose. With potassium sulphate one can use a smaller dose and a lower concentration of novocaine than otherwise. It makes the anaesthesia more reliable and of longer duration.

Braun advised the use of potassium sulphate to improve the anaesthesia but warned against lowering the concentration of the novocaine, if we wish to get a reliable anaesthesia. It is true that operations can be successfully performed even with a very dilute novocaine-adrenaline solution, but the anaesthesia is not reliable. If a very dilute solution is injected into the tissues and certain part of this tissue escapes a thorough infiltration with this anaesthetic then failure results. But if the solution is more concentrated, that is, the solution contains a surplus of the novocaine then the failure in the technique of injection is corrected and a good anaesthesia is obtained.

COMBINED ANAESTHESIA

The principle of preventing painful impulses from reaching the brain by anaesthetizing the sensory nerves supplying the operative field in combination with a general anaesthetic can be accomplished by using blocking and infiltration anaesthesia, by employing proper technique and varying the concentration of the solution as the field requires. However, the employment of the local anaesthetic and the concentration of the novocaine-adrenalin solution should be the same when combined with a general anaesthetic as when used without it, otherwise the result will not be reliable. According to Braun and others with large experience the concentration of the novocaine-adrenaline solution should not be less than 0.5%, except when a large amount of the solution has to be used. Novocaine itself produces a very short anaesthesia and it became a useful anaesthetic in major operations only since it was learned to combine adrenaline with it. If the concentration of the novocaine-adrenaline solution is lower than needed, it may be that in the early part of the operation the local anaesthesia is satisfactory but it wears off as the operation progresses and then the patient is under the influence of only the general anaesthetic.

I have noticed that when nitrous oxide-oxygen and local anaesthesia are combined and the patients react—thus showing that they are being hurt—the anaesthetist deepens the general anaesthesia by the addition of ether. The nitrous oxide is blamed in that it does not produce anaesthesia

deep enough for certain operations, even though it is combined with local anaesthesia. The fact is that the local anaesthesia has not been done properly and is the cause of the patients reaction and of the need of deepening the general anaesthesia by the addition of ether.

If the local anaesthetic is efficient the patient may come out of the general anaesthetic and still not feel any pain.

ILLUSTRATIVE CASE

The following case illustrates such technique and its indication:

April 23, 1914, Mr. G. H. H.—Splenectomy for pernicious anaemia. Symptoms of two years duration. The patient lived in a small town. He was so weak he could not sit up, and when supported he fainted. To transport him was out of the question so the operation was done in his home. The upper part of the abdominal wall was anaesthetized by circuminjection with 0.5 per cent. of novocaine-adrenaline solution. A left pararectus incision was made and nitrous oxide-oxygen was given after the peritoneum was opened. The spleen was not enlarged, but was very adherent. After separating the adhesions the friable spleen was delivered into the wound, coaxing it out a little with each inspiration. The vessels were ligated, and the spleen extirpated. The bed, where the spleen had been, was inspected then the general anaesthetic was discontinued and the abdomen closed while the patient was conscious; very little "gas" having been used. The patient sat up in bed two days later and was about after three weeks. Although he improved following operation, his death occurred eleven months later.

This case demonstrated that local anaesthesia, administered in this way, was effective. Nitrous oxid-oxygen was required but a short time and only during removal of the spleen. The consciousness of the patient was no handicap in any way, either during or after operation.

Relaxation can be secured with local anaesthesia alone, if used properly and the administration of nitrous oxid-oxygen should have no other purpose than to produce unconsciousness. In case of reaction on the part of the patient the local anaesthesia should be improved and not the general anaesthesia deepened. Local anaesthesia properly employed with nitrous oxide-oxygen anaesthesia should make the use of ether in the combined technique unnecessary.

THE WAITING PERIOD AND OTHER CONSIDERATIONS

It is also worth while mentioning that anaesthesia is not produced in all tissues soon after the injection but that a certain time must elapse before the anaesthesia sets in. This applies not only to blocking anaesthesia but also to direct infiltrations, especially when the concentration of the solution is too low.

Judging from my own experience consciousness is not a handicap either to the patients or the sur-

geon and sometimes has a favorable influence on the mind of the patient. The patients being conscious and experiencing no pain belittle the danger of the operation, their confidence in the surgeon increases, their spirits rise and some patients even joke during the course of an operation. The main objection for the use of local anaesthetic is that it does not eliminate fear. In patients, who fear to undergo an operation without a general anaesthetic, who cannot stand the least pain such as caused by the introduction of the needle and those in whom it is advisable to eliminate even this pain, it would be well to administer nitrous oxide or ethyl chloride as a general anaesthetic while the local anaesthetic is being injected.

Some surgeons object to local anaesthetics in their large clinics because of the time required. In the *first* place anything conducive to the welfare and safety of the patient should stand above all other considerations in the operator's mind; *second*, the field of operation may be anaesthetized by a well trained assistant while the operator is finishing another operation. But it is necessary that the surgeon injecting the local anaesthetic must be well trained, for it has to be born in mind that success depends on the administration and that failures are not due to the drug. If the surgeon has only one case on his schedule, the time required for the injection of the anaesthetic is not much longer than that necessary to put the patient to sleep.

The danger of injecting the solution into a vein is eliminated when the needle is continuously moved while injecting the solution.

ADVANTAGES

Local anaesthesia removes the danger which may result from general narcosis. The patient is in better condition post-operatively without pain, nausea or vomiting and thus stronger. Post-operative complications due to a general anaesthetic are not feared. The most striking advantages are seen when employing local anaesthesia in acute toxic cases such as intestinal obstruction, strangulated hernias and toxic goiter. Local anaesthesia is the method of choice in such cases. The hospital also profits because less nursing is required and an anaesthetist is not needed. If used for weak patients when narcosis is feared, why not use it generally for patients in good condition? What contraindication can there be for a patient considered a good risk?

The advantages of local anaesthesia will be best emphasized by discussing its special application and by the citation of a few cases.

ILLUSTRATIVE CASE

In November 1913, while practicing in Grand Rapids, Mich., I was sent by my associate to see a patient on a farm near Carson City, Mich., and to operate if necessary. I found a man of fifty-five with intestinal obstruction of eight days' duration. He was vomiting continuously, was in a

severe toxic condition and nearly pulseless. In the absence of hospital facilities I was compelled to operate in his home. I prepared a 0.5 per cent. novocaine-adrenaline solution and circuminjected the field for a right pararectus incision near the scar of a former appendectomy wound. Two bands constricting the ilium were found and freed and the abdomen closed. Patient was returned to bed, and made an uneventful recovery.

This case was an extremely poor operative risk and well illustrates the advantage of using local anaesthesia. Had I been dependent on a general anaesthetic, to say nothing of an inexperienced anaesthetist, I would no doubt have lost this patient.

Another case illustrating the value of local anaesthesia in extremely hazardous cases is that of Mrs. W., aged 73 years, seen in December, 1918.

The symptoms were those of an incarcerated hernia of four days' duration, with no fever. Arteriosclerosis, intermittent pulse and a chronic affection of both lungs were present. The local findings of the examination were rather obscure, inasmuch as a diffuse swelling of the subcutaneous tissues were present in the region of Poupart's ligament and no hernia could be felt coming through the femoral ring. A distinct, very tender hard mass was palpated in the inguinal region extending toward the femoral ring where the tenderness was most pronounced.

Diagnosis.—Strangulated femoral hernia with the possibility of a properitoneal inguinal hernia. In consultation with Dr. Hamann this diagnosis was agreed upon.

The operation was done with 0.5 per cent. novocaine-adrenaline solution, 130 c.c. being used.

Technique of Injection.—This consisted of circuminjection of the operative territory subcutaneously and subaponeurotically. The ilioinguinal and iliohypogastric nerves were blocked before reaching the inguinal region. Incision was made parallel to and above Poupart's ligament. A strangulated femoral hernia was found, the sac containing pus and the gangrenous appendix and mesenterium (a retrograde incarceration was also present). Appendectomy, resection of the gangrenous mass, reconstruction of the operative field with drainage above Poupart's ligament followed. Patient made an entirely uneventful recovery.

This patient with both lungs severely affected, with a bad heart and albumen in the urine, would not have withstood well even the mildest form of general anaesthesia.

This case also emphasizes the fact that even with the best hospital facilities and best anaesthetist at hand, the need may arise when the knowledge and use of local anaesthesia become imperative.

THE INFLUENCE OF LOCAL ANAESTHESIA IN OBVIATING OPERATIVE DREAD

That local anaesthesia will be the anaesthetic

of choice in the future can best be proved in large institutions where many cases are under the control of one surgeon. In such hospitals having 8 to 12 patients in a ward awaiting their operations, each one anxiously watches for the return of his fellow patient from the operating room. They quickly observe the difference in the condition of those operated on under local anaesthesia and of those who have had a general anaesthetic. They see the former quiet, without any pain, nausea or vomiting and able to quench his thirst at once. Then they ask to be operated on under local anaesthesia. These patients are best prepared for it. This has been my experience while serving as assistant in the hospital in Budapest, Hungary, where such conditions obtained. Hertzler reports similar incidents.

In private practice it is important to get the patient in the same frame of mind as those who ask for it in the ward. In general I have done this by studying their attitude while taking their history. The most opportune time to suggest local anaesthesia is when the patient inquires about the danger of the operation. Many fear being put to sleep, some the sickness after the ether and consent only when they learn that is not necessary. Never tell a patient in a way to cause him fear narcosis, but explain both methods and let him choose. Never force a patient. Always explain to the patient that he will feel the insertion of the needle and what it is like. If the surgeon omits this, occasionally the patient will ask to be put to sleep after the first injection, or will become restless in the early part of the operation. The confidence of the patient in the doctor is very important.

PRELIMINARY REQUISITES

Morphine is not necessary. I have seen vomiting mostly when morphine has been given before operation. Instead pantopon may be administered. Veronal may be given to nervous patients the night before the operation.

The patient should be prepared the day before the operation. For *stomach operations* the stomach should be washed out the night before the operation or not at all, if there is complete co-operation between operator and assistant. Rest for the patient before the operation is essential.

It is well to have a nurse at the patient's head while being operated on to act as "moral anaesthetist." There are patients who will complain however good the local anaesthesia may be and in such cases a few drops of ether or even alcohol on a mask will suffice to keep the patient quiet.

It is important to place the patient comfortably on the table and to spare him all unnecessary discomfort and annoyance. Patients should be brought into the operating room or the anaesthesia room when everything is prepared and the operator is ready to inject the solution.

If iodine should run down the sides to the back it will cause much discomfort. This may go un-

noticed when narcosis is employed but is quickly brought to the operators attention when the patient is awake.

Such a break in the technique is enough to disturb the course of operation and compel the surgeon to resort to general anaesthesia. I have had such experiences.

The fact that most patients wish to be unconscious while being operated on is because this is a lifelong custom and because they do not know nor do they readily believe that operations can be performed without a general anaesthetic. As soon as surgeons will become just as skilled in the administration of local anaesthesia as anaesthetists of today are in the use of general anaesthesia, people will have more faith in this method and the time may come when many of the patients will refuse to be operated on in narcosis.

The following case illustrates that the fear of a general anaesthetic, in a patient who already had been operated on under narcosis, is greater than the desire to pass the stage of operation in an unconscious state; and if properly informed about local anaesthesia such a patient may readily consent to the operation.

Mrs. P. S., 27 years of age, was to be operated on for retroverted uterus, cystocele, vaginal and perineal laceration. Before the operation was performed a curetting was done under narcosis. The pathologist's report required a second curetting which was done with local anaesthesia. Ten c.c. of a 1 per cent. novocaine-adrenaline solution was injected into the parametrium on each side and about 50 c.c. of a 0.5 per cent. solution injected anteriorly and posteriorly of the uterus. The patient was extremely appreciative after the curetting and asked to have any further operation performed with local anaesthesia.

After a favorable report from the pathologist vaginal interposition of the uterus with posterior repair of the vagina and perineum was done.

Morphine was given 1 hour before the operation. Parasacral, transverse perineal, parametral and subcutaneous injections at each side of the labia majora were done under nitrous oxide-oxygen anaesthesia; then the general anaesthesia was discontinued and the operation performed while the patient was conscious, and complaining only because of the uncomfortable position of the legs. The bloodless field was of great help during the operation. The patient left the operating room in very good condition and was very grateful. She was nauseated later and I attribute this to the use of morphine. Recovery was uneventful and remarkably easy.

That the fear of a general anaesthetic, even in children who already had been operated on under narcosis, is greater than the fear of operation is illustrated by the following case:

St. S., 5 years of age, was to be operated on for empyema of the left thorax. The boy was yelling when brought to the operating room and would not lie quiet on the table while being prepared. He

implored the nurse not to put the mask over his mouth. Realizing that the child was frightened because he had had a general anaesthetic when his tonsils had been removed I promised him not to put the mask over his mouth. After that he lay quietly on the table and reacted only slightly to the first insertion of the needle. The rib was resected while the child was talking to the nurse making no complaints whatever.

To emphasize the necessity and importance of carefully preparing the patient for local anaesthesia and gaining the confidence of the patient even while taking the history, is well illustrated by the following case.

January, 1915, Mr. M. R.—Bilateral inguinal hernia. He felt relieved when told that the operation could be performed without a general anaesthetic. I explained to him what he would feel (i. e., the insertion of the needle). While I was preparing the solution the operating room staff openly expressed their distrust. I have had similar experience before and realized that they had never seen this method before. The anaesthesia was perfect, operation and recovery were uneventful. Afterward I learned that the orderly, while shaving the patient, tried to persuade him to take a general anaesthetic. Had this patient not been properly prepared before the operation, he would have lost his confidence and asked for a general anaesthetic.

THE SURGICAL AID OF LOCAL ANAESTHESIA

From 1906 to the end of 1912 as assistant in St. Stephen's hospital at Budapest, Hungary, I had the opportunity to participate in, observe and perform several hundred radical operations for cancer of the upper and lower jaw, cheek and tongue with extirpation of glands of the neck and combined with plastics, and goitre cases. Some were operated on under narcosis and some under novocaine—adrenaline anaesthesia. The mortality and morbidity figures were strikingly in favor of the latter. This was shown in many ways:

1. The anaesthesia was complete and there was no anaesthetist in the way.
2. The surgeon did not fear operating in the mouth, as he did under general anaesthesia and there were no interruptions caused by the patient gagging or coming out of the narcosis.
3. The patient did not swallow the blood nor did any blood enter the trachea.
4. There was less or no hemorrhage at all.
5. The field was not obscured by mucus.
6. Postoperative pneumonia and bronchitis were markedly diminished.
7. There was no shock. The patient could walk from the table. It was most gratifying to the surgeon when the patient asked for this privilege after an operation regarded as most dangerous under general anaesthesia.
8. The patient could be fed when returned to

his bed and his strength was conserved. His recuperation was easier.

Besides the general advantages above mentioned the conscious patient can aid the surgeon. In goiter operations, before tying the ligature on the inferior thyroid artery, the patient is asked to speak and thus the surgeon can determine whether or not the recurrent laryngeal nerve has been included in the ligature. If so, no harm has been done for the ligature can be removed and placed properly.

In cases of deep substernal goiter the patient may aid in delivering the goiter. This was exemplified in the following case:

In January, 1913, I operated Sister A., in Grand Rapids, Mich., at St. Mary's hospital, for a retrosternal Basedow goiter. Patient had X-ray treatment before. Removal of left lobe as large as a fist. The base of the lobe could not be reached by the tip of the finger, so the patient was asked to cough. This brought the lobe high enough so that the index finger could be slipped under its base. Then she was asked to cough again. Each cough brought it higher, so that all that was necessary to do was to support it and thus it was delivered without any force and with the aid of the patient. X-ray treatments had made it very friable so that the least force might have produced hemorrhage.

In another goiter case the patient gave the warning of danger. In this case the goiter was firmly adherent, surrounding and compressing the trachea. As soon as the lobes were delivered the patient complained of difficulty of inspiration. There was no pulling on the trachea. The patient urged me to hurry. One lobe was resected and immediately the patient stopped breathing. The trachea had collapsed. By deep manipulation near the manubrium of the sternum jugulum and with artificial respiration the lumen was re-established and the patient breathed. Had this happened under narcosis the surgeon would have been taken unaware.

In goiter operations the blocking of the second, third and fourth cervical nerves together with a subcutaneous and subfascial circuminjection of the field of operation give the best results. Lately I have read that Haertel and again later Kulenkampf have simplified Heidenhaim's method of anaesthesia of the neck for thyroid work.

For operations on the lips, cheeks or jaws combined with block dissection of the glands of the neck, the above method is supplemented by blocking the branch of the trigeminus supplying that site.

Operations about the anus are especially well adapted to this method of anaesthesia. The deepest narcosis is necessary to allow the operator to stretch the sphincter without making the patient react. And yet under local anaesthesia a wide stretching is obtained without causing the slightest pain.

Resection of the rectum for tumors can be done

very well under parasacral anaesthesia and circuminjection of the field of operation. To have a bloodless field perineal blocking may be added to it. If the tumor is situated high general anaesthesia, best nitrous oxid—oxygen or ethyl-chloride must be given for a short time when the operator reaches above the pelvic peritoneum. In the manner just described I removed a cancer of the rectum (in 1918) situated so high that only the lower edge of the tumor could be felt by rectal examination.

Curettage can be done by injections into the parametrium and anteriorly and posteriorly to the uterus.

Anterior and posterior colporrhaphy and perineorrhaphy can be done by transverse perineal blocking and by injections anteriorly of the uterus and subcutaneous injections at each side of the labia majora.

It is exceptionally beneficent to use local anaesthesia in umbilical hernias. Patients with umbilical hernia are generally fat and liable to pneumonia. There is no coughing, nor vomiting either during or after operation. Subcutaneous and subaponeurotic circuminjections of the operative area are usually satisfactory.

Inguinal hernias are done either by direct infiltrations alone subcutaneously and subaponeurotically, or by blocking of the ilio-inguinal and ilio-hypogastric nerves before they reach the inguinal region and subcutaneous and subaponeurotic circuminjection of the field of operation. More reliable and satisfactory results are now obtained by strictly following the latter method.

In intra-abdominal operations I have used the direct infiltration, the circuminjection of the field of operation and the paravertebral method of blocking anaesthesia. My personal experience with local anaesthesia in intra-abdominal work is limited. Nearly perfect results have been obtained with paravertebral blocking anaesthesia combined with circuminjection of the field. If direct infiltration or circuminjection of the field has been employed and extensive work has had to be done in the abdomen I have usually added a general anaesthetic while working in the abdomen.

Since 1917, in Germany, the method of choice seems to be the circuminjection of the abdominal wall and injection of the splanchnic nerves for operation in the upper abdominal organs. The anaesthesia of the splanchnic nerves entirely eliminates pains or the so-called abdominal sensations. I have had no personal experience as yet with this method.

Special care must be taken to place the patients as comfortably as possible on the table when kidney operations are done under paravertebral anaesthesia.

Fractures and dislocations, especially those of the upper extremities can be reduced very well with local anaesthesia, because it gives as complete relaxation of the muscles as can be obtained

otherwise only under deep general anaesthesia, and because it permits the patient being moved and examined in the X-ray room with perfect ease and safety. Should the X-ray show that the position of the fragments is not correct, it can be improved without any annoyance to the patient. In fact the fracture or the dislocation can be set with the aid of the screen.

It is also evident that other operations on the extremities can be done equally well under local anaesthesia. Kulenkampf's brachial plexus anaesthesia is an especially good method for the upper extremities. I have had good success with this method and have been able to regulate the duration of the anaesthesia by the concentration of the solution used.

I have reduced a dislocation of the shoulder of eight days duration in a powerfully built man. I injected the plexus in my office then the patient walked up to the X-ray room of Drs. Hill and Thomas and with the help of Dr. A. Strauss I reduced the dislocation while Dr. Thomas took pictures at different stages of reduction for the sake of studying the mechanism of reductions. Reduction was comparatively easy.

TEACHING LOCAL ANAESTHESIA

The art of using local anaesthesia should be taught in all medical schools. It has so many possibilities, that are being so rapidly developed, it is in so many cases life-saving and the only method indicated that every student should have the opportunity to learn it well enough to use it.

Local anaesthesia is being used today extensively in every field of surgery. It has been adapted with varying technique for operations on all parts of the body. To get the best results with local anaesthesia, one must know how and when to use the local infiltration, nerve blocking near the field of operation or far from it and the combination of these methods.

Postgraduate instruction should be given too, so that surgeons who have not employed the method may become familiar with it. These courses may well be given on the cadaver.

322 OSBORN BLDG.

More Misbranded Npstrums.—The following products have been the subject of prosecution by the federal authorities: Dr. Clifton's Brazilian Herbs (Clifton Drug Co.), sold under therapeutic claims which were false and fraudulent. Her-Vo (Her-Vo Mfg. Co.), sold with therapeutic claims which were false and fraudulent. Acetylo-Salicylic Acid Tablets (James and Annis), containing acetanilid but no acetylsalicylic acid (Jour. A. M. A., Nov. 13, 1920, p. 1359).

"Lepso" Epilepsy Cure.—Like most epilepsy "cures," Lepso was found by the A. M. A. Chemical Laboratory to be essentially a bromid mixture. It was found to contain the equivalent of 51 grains of potassium bromid to the dose (Jour. A. M. A., Nov. 20, 1920, p. 1443).

Salem Typhoid Epidemic Stresses Need of Renewed Vigilance in Supervision of Public Water Supplies

Many years have elapsed since so extensive an outbreak of water-borne typhoid has been reported as the one from which the city of Salem has been suffering for more than two months. With a mortality of 23 lives, morbidity approaching 900 cases and economic cost approximating \$450,000, it has been rightfully termed a disaster, and has become the subject of serious consideration and discussion in medical journals and lay publications throughout the country.

The Salem epidemic emphasizes the fact that in spite of the enormous improvements effected in the character of public water supplies in this country by chlorination and sand filtration, the danger of water-borne typhoid is by no means a thing of the past. At least three sources of water contamination have occurred with disturbing frequency in recent years: First, irregularities in the conduct of the chlorination process leading to inadequate treatment of a contaminated water, no other safeguard being provided on account of the reliance felt on the chlorine treatment. Second, the use of a dual water supply system by means of which factories and office buildings are supplied, usually for fire protection purposes, with water from a contaminated source; the valves intended to separate the private system from the public water supply get out of order or fail to work at times of pressure change and so permit the mingling of the polluted water with the otherwise safeguarded public supply. Third, improper handling of a good deep well water after it is brought to the surface, thus allowing for accidental contamination during floods or other unusual conditions. Investigations place the Salem outbreak in the latter class.

For the data given in the account of the epidemic below *The Journal* is indebted to Dr. F. G. Boudreau, chief of the bureau of communicable diseases of the State Department of Health, who personally directed the department's activities in combatting the epidemic.

Preliminary Statement

On October 13, 1920, the health commissioner of Salem reported that diarrhea and enteritis was quite prevalent in Salem and environs. Dr. Charles Armstrong, epidemiological aide to the State Department of Health, was sent to Salem to investigate the source of the disease. Dr. Armstrong reported on the 16th that after very careful investigation he had found approximately 7,000 cases of a non-specific diarrhea and enteritis which was possibly due to the public water supply.

An engineer from the department was at once detailed to prepare outfits for bacterial analysis, and proceeded to Salem to make a thorough ex-

amination of the water supply. On October 19 Mr. E. I. Roberts, the engineer detailed for this work, reported that his analysis showed that the water supply was contaminated, and that the probable source of the contamination was located. A warning to boil all water was issued the same day to residents of Salem. At the same time Mr. F. H. Waring, another engineer of the department, started for Salem with chlorination apparatus which was completely installed and operating on the afternoon of October 20. On the same day Messrs. Roberts and Waring advised city council to take immediate steps to permanently correct the water supply contamination.

On November 9 seven members of the staff of the State Department of Health were sent to take charge of the local situation. Dr. F. G. Boudreau and four members of his division were given charge of epidemiology and medical activities, while Mr. W. H. Dittoe and two members of his division had charge of water supplies and sewage disposal. Mr. R. E. Tabett, sanitary engineer, was sent by the United States Public Health Service to cooperate with the State Department of Health. Miss Hulda Cron, state supervising nurse, was sent later to take charge of nursing activities. The local health commissioner, Dr. R. M. Schwartz, cooperated in every way with state and federal officials, and this was true also of the local public health nursing service under Miss Donsing, and the local chapter of the Red Cross, in charge of Mrs. Smith. The local board of health, the citizens committee, and the Chamber of Commerce also cooperated fully and proved of great assistance. Other city officials, and particularly the mayor and the directors of service and safety, gave every possible aid to the campaign of prevention.

Chronology of the Epidemic

Five cases of typhoid fever occurred in Salem during August and September. These cases were widely scattered, at least two received their infection from sources outside the city, and no common source for the others was discoverable. Four cases were reported between the first and nineteenth of October, but it was ascertained afterwards that over a hundred patients had taken to bed during this period. Cases came in rapidly after the 19th, and the peak of the epidemic occurred during the last week of October and first week of November. On November 1st fifty-four persons took to bed with typhoid fever. After the first week in November the number of cases reported dwindled rapidly, until, during the early part of December, only scattered cases were occurring, and many of these were traceable to contact infection. The total number of cases

which have occurred in the epidemic to date (December 10) is 866, and the total number of deaths, 23. As the population of Salem is now approximately 10,000, the attack rate to date is 86 per thousand. The case fatality rate so far is less than three per cent. Eight per cent. is a usual case fatality rate for waterborne typhoid fever, but it is not expected that the rate in Salem will be so high.

The Water Supply

The water supply of Salem is drawn from three groups of deep wells. Water from these wells flows by gravity into three reservoirs from which it is pumped into the city mains. One group of wells is situated in a built up portion of the city, and the gravity line leading from these wells is of vitrified clay pipe. This line was laid in 1900, and portions of it had to be cleaned about five years ago, because of roots which had grown into it and obstructed the flow of water. The gravity lines receiving the flow from the two other groups of wells are composed of cast iron.

Engineers of the State Department of Health when examining the water supply in October found that the water from the various groups of wells was pure, but the water in the reservoir and on the distribution system was contaminated. By a process of elimination it was determined that the probable source of contamination was in the gravity tile line. The water was immediately chlorinated, and the tile line was cut off above the point where a cast iron pipe from another well entered it. Water from the wells which ordinarily discharged into the tile line was pumped directly into the mains, and the lower end of the tile line below the junction of the cast iron pipe was replaced with cast iron line as promptly as possible. The reservoirs were cleaned, the distribution system flushed and all other possible precautions taken to make the public water supply safe. It must be emphasized, however, that previous to 1920 all examinations and analyses of the public water supply of Salem had shown the water to be of good quality and safe for domestic use.

Measures Taken to Prevent the Spread of Typhoid

The following are the steps taken to control the epidemic in Salem.

(A) SANITARY MEASURES

1. Emergency chlorination of the public water supply. This was accomplished on October 20.
2. Installation of a permanent chlorine machine. This was done to release the State Department of Health machine for emergency purposes, and because Salem needs a permanent machine in case of any accident to the water supply.
3. Chlorination of city sewage. The sewage of

Salem passes through a disposal plant but effective purification does not take place. The sewage was chlorinated to protect individuals and communities situated on the watershed below Salem.

4. All privies were disinfected by the free use of chloride of lime.

5. Use of the tile gravity line was discontinued.

6. Cast iron pipe was laid to replace the lower end of the tile gravity line.

7. All dug wells on properties having city water service were disinfected by the free use of chloride of lime.

8. A sanitary investigation of all premises was made to determine the number of cases of typhoid fever, the number of cases of diarrhea and enteritis, the number and kind of wells, the number and kind of privies, the presence of water and sewer connections, and other useful information. This was accomplished by the war workers organization, who functioned efficiently and rapidly.

9. Inspection of all places selling food was made by the aid of six volunteer sanitary policemen. Many improvements resulted.

10. All milkmen selling raw milk were ordered to have their supply pasteurized by the holding method. This was done at one of the local plants, which is large and modern in every respect.

11. All milk bottles and utensils were thoroughly sterilized at the same plant. Pasteurization of utensils was in force three days after the situation was placed in charge of State Department of Health representatives.

12. Milkmen were forbidden to leave milk bottles at premises where typhoid fever existed. Such householders were required to place receptacles for milk on the door step.

13. All shops were forbidden to sell milk in the original containers over the counter. A notice to this effect was placed in every store where milk was sold.

14. Every house in which typhoid existed was placarded with a printed sign.

15. A printed notice to boil all water was placed in every home.

16. A printed notice on the disinfection of discharges was placed in every home.

(B) MEDICAL MEASURES

1. The State Department of Health supplied large amounts of triple anti-typhoid vaccine. A sufficient amount was supplied to inoculate at least half the population.

2. The local health department provided free inoculation service.

3. Through a sum of money appropriated by the State Board of Control at the request of the State Department of Health, free medical consultation service was provided. The internists who came to Salem for this purpose were Dr. Henry A. Christian of Boston, Drs. C. F. Hoover and Blankenhorn of Cleveland, and Dr. W. H.

Bunn of Youngstown. Drs. Christian and Bunn remained in Salem as long as there was any need of consulting service. The local physicians made free use of the services of the consultants.

4. Free surgical consulting service was also provided. The medical profession of Salem was quite capable of coping with any surgical emergency, but blood transfusion was advised by the medical consultants in some cases, and surgeons from the service of Dr. G. W. Crile at Lakeside were secured to group donors and perform transfusions.

5. A private duty nursing registry was provided so as to keep an adequate supply of nurses in Salem. All nurses for private duty service were required to report at the registry upon arrival at Salem and before departure. Nurses were placed in homes without regard to the financial resource of the householders. Dr. Christian commented favorably upon the fact that poor and rich alike received adequate nursing service. An incomplete census of nurses showed that at least 250 were in Salem at one time or another during the epidemic.

6. Free laboratory services were provided by the establishment of a branch state laboratory. This laboratory was established within five days after the arrival of State Department of Health representatives, and in two weeks more than 800 specimens had been examined. The work was so arranged that physicians merely telephoned requests for specimens and a technician took the specimen and sent the report to the physician. Examinations consisted of blood counts, Widal's, blood cultures, urine and miscellaneous examinations.

7. A number of the patients seen by consultants were suffering severely from loss of blood, so that transfusion was advised. An appeal was put in the press for volunteer donors, and as these reported to the health department their blood was grouped and a record made of the name, address and grouping.

8. Ten actual blood transfusions were performed by members of the surgical consulting staff.

(C) INVESTIGATIONS

1. A sickness survey of every home in Salem was made to determine the number of cases of typhoid fever.

2. Physicians of the department investigated all reported and unreported cases of typhoid fever for the purpose of securing epidemiological histories of each.

3. A study of the outbreak of diarrhea and enteritis was made to determine its chronology, distribution and extent.

4. The typhoid fever epidemic was studied epidemiologically as to

- a. Geographical distribution
- b. Chronological distribution
- c. Age distribution

d. Sex distribution

e. Possible common factors such as public and private water supplies, milk, food and contact.

5. The municipal water supply was thoroughly investigated.

6. A study was made of the municipal sewerage system.

(D) ADVICE

1. Council was advised to notify riparian owners along the Little Beaver of the danger of using water from this source.

2. Council was advised to employ a competent sanitary engineer to study and plan the development of the municipal water supply.

3. Council was advised to pass and enforce ordinances governing tapping of sewers.

4. Council was advised to require the licensing of plumbers and sewer tappers to prevent careless work and the destruction of the sewerage system.

5. Municipal officials were advised to prepare and adopt regulations providing for the abandonment of dug wells where water connections are available.

6. Municipal officials were advised to adopt and enforce regulations providing for the abandonment of privy vaults where sewers are available.

7. The board of health was advised to adopt regulations governing the handling of food.

8. Advice was given to various organizations concerning the nursing situation.

9. Advice was given concerning relief measures.

10. The board of health was advised on financial measures.

11. Advice was given to various organizations concerning the hospital situation. The local chapter of the Red Cross had established three emergency hospitals. On the advice of health officials, a fourth was established. There were approximately 180 beds available for typhoid fever patients at the height of the epidemic.

By means of the measures detailed above an attempt was made

1. To abate the primary source of the epidemic,

2. To prevent the spread of typhoid fever through secondary sources.

3. To reduce the mortality by the provision of adequate nursing, medical and hospital facilities.

4. To improve permanently the sanitary conditions of Salem so as to prevent the occurrence of a similar epidemic in the future.

It is too early to decide whether all measures taken were effective, but it is possible to state that the first three objects mentioned above have been achieved. The future history of Salem will show whether the fourth item has been accomplished.

As a result of the Salem epidemic State Health Commissioner Freeman plans to ask the next

legislature to pass two new health measures designed to protect public water supplies against pollution. The proposed measures would regulate use of water from open streams to reinforce regular city water supply in emergencies, and would require a bacteriological examination of water twice weekly in smaller towns and daily in cities.

In support of these measures Dr. Freeman points to the outcome of Salem's "economy." In putting down the tile pipe, to which the epidemic is credited, instead of iron pipe, as required by the present state regulation of water works systems, the city of Salem made a saving of \$1,500. It effected another saving in that it spent nothing for bacteriological supervision of

water supply which would have cost \$1,000 for each year. The total saving of \$2,500 is counted against the loss of \$450,000.

At the request of Dr. Boudreau of the State Department of Health, 28 physicians and health officers of north-eastern Ohio assembled in Salem on December 2 to study the local situation. After hearing the history of the epidemic they examined the charting system inaugurated, investigated the sanitary survey made in and around the city, the means of determining the cause of the epidemic, and in fact everything that has contributed to feed the epidemic or its spread. The conference was in the nature of a school, designed to put health officers on guard against development of similar situations.

OHIO HOSPITAL NOTES

—Toledo Hospital has opened a diagnostic clinic intended to bring within the means of the worthy poor the benefits to be derived from a general clinical diagnosis, including all laboratory and X-ray work necessary. The clinic is open from eight to ten on five mornings a week. Members of the staff contribute their services, but a fee of \$5.00 is charged to cover all examinations and to defray a portion of the laboratory and X-ray expenses. Complete reports of findings are sent to the patients' physicians and cases referred to them for treatment.

—Establishment of a maternity ward in Marion's new city hospital is assured through a bequest of \$4,000 in the will of Mrs. George E. Salmon.

—Dr. Hugh S. Cumming, surgeon general of the United States Public Health Service, was a visitor in Cincinnati recently, when he visited the Altamont, Shelley Arms and Avenal Hotels, located just across the Ohio line in the Kentucky highlands, which were taken over as hospitals under the service on December 15.

—Plans originated several years ago, for the erection of a 75-bed addition to Aultman Hospital, Canton, have been revived by trustees of the hospital, who declare that Canton and its environs with a population of 130,000, have but 191 beds available, or one bed for every 680 persons.

—Dr. Peter Vermuellen, a graduate of the University of Michigan, and for seven years connected with the Grand Rapids Soldiers' Home, has become assistant medical director of Rocky Glen Sanatorium. He has recently been located at Eudowood Sanatorium in Maryland.

—Erection of a hospital in Delphos was favored at a meeting of local physicians held at the home of Dr. H. G. Bradshaw, December 3.

—In appreciation for the splendid work of McKittrick Hospital, Kenton, established three years ago, a drive was made in November by the local ministerial association and other civic groups, for funds to meet a \$12,000 deficit in the operation of the hospital. Equipment for seven rooms of a 10-room addition now under construction has been donated.

—The laboratory of St. Vincent's Hospital, Toledo, has been moved to larger quarters and a considerable amount of new equipment installed. Under the direction of Dr. Thomas L. Ramsey the laboratory is reflecting credit to the hospital. New equipment has also been placed in the obstetrical department and nursery. Alterations on the first floor have been completed and wards divided in a manner to permit better care of the individual patient.

—S. G. Davidson, second vice-president of the American Hospital Association, has succeeded R. W. Yengling as superintendent of Youngstown Hospital. Mr. Davidson comes to Youngstown with a national reputation as a hospital executive gained through close studies of hospital and health problems in the east.

—Dr. J. V. Gallagher has resigned as chief of Staff of St. Alexis Hospital, Cleveland, after 31 years' service. He is succeeded by Dr. George E. Follansbee.

—Dr. J. P. Harbert has announced the establishment of a free surgical clinic and an outpatient clinic in his eye, ear, nose and throat hospital at Bellefontaine. Opening of the clinics was actuated by a desire to promote the remedying of defects of this nature found in indigent school children in recent examinations.

—Work on the new \$50,000 addition to Robinwood Hospital, Toledo, has begun and will be completed in about four months. This will be used as a service wing, releasing space in the main building for other purposes. A new kitchen, laboratory, library, a third operating room and a sterilizing room will be accommodated in the addition. Portable X-ray outfit and new laboratory equipment has been purchased.

Prospective Ohio Physicians from Fourteen Colleges Line Up for December Examinations of State Board

Twenty-four physicians presented themselves for examination at the regular licensing examinations held by the State Medical Board in Columbus, December 1-3. The applicants represented the following medical institutions, including two that are foreign to this continent: Chicago College of Medicine and Surgery; Eclectic Medical College, Cincinnati; Georgetown University, Washington, D. C.; Harvard Medical College; Jefferson Medical College, Philadelphia; Loyola University, Chicago; National University of Athens, Greece; Northwestern University, Chicago; Royal University of Budapest, Austria; University of Maryland; University of Pennsylvania; University of Toronto, Canada; Vanderbilt University, Nashville, Tennessee; and Western Reserve University.

For the benefit of physicians who enjoy "brushing up" a bit by answering the semi-annual examination questions of the Board, the December questions are reproduced below:

SURGERY

1. Describe a common fracture of the leg just above the ankle, giving physical signs and X-ray findings. 2. Describe technique of enterostomy, omitting opening and closing of abdominal wall. 3. Give indications for and against operation in ruptured ectopic pregnancy. 4. What class of patients take ether better than chloroform? What class neither? 5. Name one of the chief complications of skull injury and outline procedure. 6. Describe operation for empyema of Antrum Highmore. 7. Give surgical treatment and technique in carcinoma of breast. 8. Give indications for vaginal hysterectomy and describe operation. 9. Give surgical treatment of carbuncle. 10. Give procedure in a case of diabetic gangrene.—McClellan and Sawyer.

ANATOMY

1. Describe the structure of the prostate gland and give its anatomic relations. 2. Describe the gross anatomy of the larynx. 3. Describe the diaphragm, its principal openings and nerve supply. 4. Give the deep and superficial origin, course, and distribution of the tenth cranial nerve. 5. What arteries, muscles, and nerves would be severed in a cross-section at the middle of the humerus?—T. A. McC.

OBSTETRICS

1. What interval should elapse after the birth of the child before (a) tying the cord? (b) delivering the placenta? How would you proceed in a case of retained placenta? 2. What is the significance of albuminuria in pregnancy? When is treatment indicated? Give an outline of treatment you would advise. 3. What causes pre-

dispose to hemorrhage in labor? Give prophylactic treatment. 4. Give symptoms and treatment of puerperal eclampsia. 5. Diagnose breech presentation. Enumerate some of the dangerous complications of this condition.—L. H.

DIAGNOSIS

1. Name five endocrine organs. Give cardinal symptoms of diseases occurring in four. 2. Describe two diastolic murmurs. What is the prognosis for duration of fairly active life in each? 3. State the typical blood-findings in myelogenous leukemia. 4. What four signs suggest and what evidence proves, the presence of fluid in the chest? 5. Describe urinary findings and symptomatology in two types of nephritis. 6. How differentiate between scarlet fever and measles on the first day a rash appears? 7. Differentiate cancer of the rectum from other conditions simulating it. 8. How confirm a diagnosis of diphtheria? Be precise. 9. Name five characteristic signs in various syphilitic diseases. 10. Differentiate dementia paralytica from senile dementia.—B. R. McC.

PHYSIOLOGY

1. Define leukocytosis. 2. What post mortem tests should be applied to prove that air has entered the lung of a supposedly stillborn child? 3. Describe the different glands of the stomach. 4. What is the function of each class of foods in the nutritive process? 5. Give the origin and uses of lymph. 6. What is metabolism? 7. Give the function of the epiglottis. 8. Define reflex action and give examples. 9. Of the functions of vision, what is understood by accommodation? 10. What are the sources of animal heat?—J. K. S.

SPECIALTIES

1. *Syphilology*: What is the period of incubation of syphilis? How soon thereafter do secondary manifestations appear? Name some lesions of the tertiary period. 2. *Eye*: Name some causes of corneal ulcer and give treatment. 3. *Ear*: Give diagnosis of inflammation of mastoid cells. 4. *Nose*: Name some forms of nasal polypi and describe operation for their removal. 5. *Throat*: Give symptoms, diagnosis and treatment of follicular pharyngitis.—S. M. S.

PATHOLOGY, BACTERIOLOGY, PUBLIC HEALTH AND HYGIENE

1. Describe the repair of bones after fracture with explanation of reasons for faulty union in some instances. 2. Give the etiology and pathology of aneurism of the aorta. 3. Explain the possible relation between abscesses of the teeth and some forms of arthritis. 4. What pathologic

conditions are included in the term "organic heart disease"? 5. Give the proper method of obtaining specimen of suspected tuberculosis sputum. How would you send it through the mails to a laboratory, and give technique of laboratory examination? 6. Describe the colon bacillus. How isolate it? When may it be pathogenic? 7. What organisms are sometimes found in the spinal fluid? How would you identify them? 8. Name the requirements for an acceptable drinking water. 9. Mention some "industrial diseases" directly dependent upon improper conditions. 10. Outline the objects of school inspection.—J. H. J. U.

PRACTICE

1. Mention some of the causes of acute cystitis. Give symptoms and treatment. 2. Give etiology, symptoms, diagnosis and treatment of arteriosclerosis. 3. Give symptoms, diagnosis and treatment of acute pleurisy. 4. Give symptoms and diagnosis of typhoid fever in its early stages. 5. Give the symptoms, diagnosis and treatment of diphtheria, with a brief statement as to the dangers of the use of anti-toxin and how they may be avoided. 6. Give the symptoms and treatment of tetanus. In what class of injuries would you advise the prophylactic use of anti-tetanic serum? 7. Give the etiology, symptoms and treatment of bronchial asthma. 8. Give the symptoms of angina pectoris and treatment (a) during attack (b) between attacks. 9. What symptom complex is meant by apoplexy? What three pathologic conditions may account for it, and how differentiate them? 10. Give the symptoms and treatment of wood alcohol poisoning.—J. H. J. U.

CHEMISTRY

1. Define physiologic chemistry. 2. Define a carbohydrate and a hydrocarbon, giving an example of each. 3. What are peptones, and how are they produced? 4. What is the reaction of normal gastric juice, and to what is it due? 5. What is hemoglobin? Name some of its properties and its functions?—J. K. S.

MATERIA MEDICA (HOMEOPATHIC)

1. What is the Homeopathic Pharmacopeia of the United States? 2. What is the pathological effect of Phosphorus on the liver? 3. How do you detect deterioration of homeopathic drugs? 4. Give indication for Spongia in acute laryngitis. 5. In what disorders is Kali Bichromicum indicated. 6. Give characteristics of Hamamelis. 7. Differentiate between Colocynthis, Camphor and Arsenicum in intestinal disorders. 8. How does trituration affect drugs? 9. What is the formula of the first attenuation of Phosphoric acid? 10. Give symptoms indicating Ipecac in pneumonia.—C. E. S.

MATERIA MEDICA (ECLECTIC)

1. Name three plant remedies that act as

cathartics. Give specific indication for one of them, and the dose. 2. (a) Give the specific indication for Asclepias, and the usual dose. (b) What is the alkaloid of Jaborandi? 3. Name the alkaloids of opium, belladonna, nux vomica. Give dose of each. 4. Give specific indications for the use of the mineral acids. 5. Name the symptoms of Phenol poisoning. Give treatment. 6. Name four drugs of value in pneumonia, and carefully discriminate as to use and dosage. 7. Give the botanical origin and other name of macrotys, gelsemium, podophyllum, digitalis. 8. Differentiate between therapeutic uses of belladonna and gelsemium. 9. State differences between positive and negative poles of galvanic electricity. 10. Give electric treatment for enlarged prostate, sciatica, and constipation.—J. K. J.

MATERIA MEDICA (REGULAR)

1. Name the official preparations of bismuth, giving doses of each and methods of administration. 2. In cases of hyperpyrexia, name the three antipyretics you consider most efficient and safest. Give mode of administering each. 3. Name two drugs used as (a) cardiac sedatives (b) cardiac stimulants (c) cardiac tonics. Give dose of each. 4. Define (a) serum; (b) vaccine. Give example of each with dose and method of administration. 5. Give the physiologic action, use and dose of salicylate of sodium. 6. Name two drugs used in the treatment of intermittent fever. Write prescriptions showing how they are to be used. 7. What are the therapeutic uses of nitroglycerin? Give its dose. 8. Describe the action and state the dose and uses of mild chloride of mercury. 9. Give the composition, therapeutic use and dose of Dover's powder. 10. Name the principal narcotics, giving dose of each preparation. In what conditions are they indicated?—L. H.

Among limited practitioners who presented themselves for examination were nine osteopaths, three osteopaths for surgery only, six midwives, one chiropractor, two masseurs and one chiropractor.

R. P. Baker, D. O., Delaware, has been appointed by the State Medical Board to succeed J. F. Bumpus as a member of the osteopathic examining committee.

The next regular meeting of the board will be held in Columbus, January 4.

The certificate of Charles B. Dickinson, Columbus chiropractor, was revoked by the board at its December 2nd meeting for violation of Section 1275, paragraph 3, G. C., forbidding the use of extravagantly worded advertisements intended

or having a tendency to deceive and defraud the public.

A physician who had appeared before the board to explain irregularities in making insurance examinations for an industrial company, suffered a four-day suspension of his license, together with a reprimand. While recognizing the gross injustice and wholly inadequate fees received by physicians for industrial inspection and examinations, the State Medical Board warns physicians in this work that irregular practices will not be condoned.

PROSECUTIONS.

An active campaign in Youngstown by the inspector of the State Medical Board, has resulted in the conviction of several quacks and the closing up of several others. The inspection developed a number of unusual methods.

In the case of Ed. Reigard who has been doing a landoffice business at the different homes in Steelton, the inspector paid an unannounced visit to a house and found 18 victims waiting in the kitchen and dining room. Reigard was "curing" in the parlor. The method of procedure was reading a passage of Scripture followed by the "laying on of hands." Then the victims were relieved of their money at the rate of three to ten dollars a treatment, still retaining their respective maladies.

The inspector was accompanied by an officer of the law and court was held on the spot, with the result that Reigard paid back every dollar he took in that day as well as \$40.00 he had previously taken from a hopeless cripple.

It is expected that Reigard is permanently "cured" so far as Ohio is concerned.

Other arrests made were: Carrie Collins, a dispenser of patent medicines, Rev. Schuster, an illegal medical practitioner, and Louis L. Sanders, M. D. (unlicensed), who appeared in court and pleaded guilty.

Compulsory Vaccination Upheld

In response to a request of the Cincinnati Board of Education for a legal opinion covering the rights of the board in excluding unvaccinated children from school, the City Solicitor's Office rendered an opinion that will probably be effective in settling all controversies on this point. The opinion reaffirmed the legal right of the board to adopt a rule providing for compulsory vaccination and upheld the statutes providing for the cooperating of the school board with the board of health in preventing epidemics.

The decision was rendered in settlement of a specific case which grew to unusual proportions. An irate parent, whose three unvaccinated children had been excluded from school, served notice that he would hold the principal of the

school legally and financially liable for damages if he either permitted the vaccination of his children or excluded them from school for failure to be examined or vaccinated.

Finding itself between two fires because attendance at school is made mandatory by law, while it is incumbent on the school board to cooperate with the health department by excluding unvaccinated children to prevent the spread of smallpox, the board of education submitted the matter to the City Solicitor for an opinion. The health department declared its willingness to abide by the opinion rendered and permitted the children in question to attend school pending receipt of the opinion.

"Germs" and "Exercise" Characters in Unique Pageant

"And They Lived Happily Ever After" was the title of a spectacular entertainment which made use of Christmas cheer as health propaganda, given by Columbus school children as their third annual holiday production. The entertainment was designed at the request of the Ohio Public Health Association to promote sound ideas as to health, and the name was selected to stress the health theme.

The story dealt with the value of pure air, sunshine, wholesome food, cleanliness, as emphasized in fantastic episodes by allegorical characters, based upon the Modern Health Crusade in the schools. Every number of the spectacle was arranged so that the story of the fight against germs and disease was easily understood without the use of extensive dialogue. Rich settings, vividly colored, beautiful costumes and elaborate lighting effects were employed in the presentation. A cast of five hundred children took part.

Drive for Health Demonstration Funds in Portage County

Sunday, December 5, was observed by Portage County as "Health Day" and marked the opening of a week's campaign for funds with which to conduct the health demonstration to be staged by the State Department in that county this year to illustrate the efficacy of modern health administration. State Health Commissioner Freeman addressed meetings in various parts of the county on "Health Day" and explained the working details of the demonstration and its financial requirements.

The total cost of the demonstration was estimated at \$45,000, of which sum more than half has been assumed by county welfare organizations and state and national organizations, leaving a quota of \$2,000 to be raised by popular subscription.

DEATHS IN OHIO

Albert P. Black, M. D., National Normal University, College of Medicine, Lebanon, 1896; aged 60; former member of the Ohio State Medical Association; died at St. Vincent's Hospital, Toledo, November 21, from cerebral hemorrhage. Dr. Black's home was at Bradner, Wood county, where he had spent his entire medical career. He was a former mayor of the village and at the time of his death was president of the local board of education. Surviving are his widow, three sons and two daughters.

William McGranaghan Blaine, M. D., Pulte Medical College, Cincinnati, 1895; aged 48; died at the Ohio Hotel, Youngstown, November 21, from neuralgia of the heart, induced by acute indigestion. Dr. Blaine was a practitioner in Youngstown for 25 years, having entered the office of his uncle, the late Dr. William H. McGranaghan of that city, immediately on completion of his medical studies. During the World War he served as a member of the Army Medical Corps, specializing in nervous and mental diseases. He leaves his father, one brother and one sister, residents of Cincinnati.

William Herman Buechner, M. D., Western Reserve University School of Medicine, 1885; aged 56; member of the Ohio State Medical Association and Fellow of the American Medical Association; died in Youngstown, December 14, after a four days' illness with pneumonia.

Henry H. Chamberlain, M. D., Eclectic Medical College, Cincinnati, 1884; aged 61; died at his home in Canton, December 4, following an illness of two years' duration. Dr. Chamberlain came to Canton from Titusville, Pennsylvania, 22 years ago. His widow and one son, Dr. Wilson S. Chamberlain of Cleveland, survive.

Grant Marchant, M. D., Columbus Medical College, 1887; aged 55; former member of the Ohio State Medical Association; died at his home near Jacksonville, Florida, November 28. Dr. Marchant's Ohio residence was at Milledgeville, Fayette county, where he practiced for many years, but he had spent a large part of the past five years in the south.

George Burnet Orr, M. D., Medical College of Ohio, 1869; aged 79; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at the home of his daughter in New York, November 8, from dropsy. Dr. Orr retired last summer after 51 years' practice in Cincinnati. He is survived by his wife and two daughters.

Ralph Henry Sill, M. D., Western Reserve University, School of Medicine, Cleveland, 1905; aged 40; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Cleveland, November 23. Dr. Sill entered practice in Cleveland immediately after his graduation, and except for two years spent in military service in the Canal Zone during the recent war, spent his entire professional life there. His widow survives.

Harry H. Smith, M. D., Indiana Medical College, School of Medicine of Purdue University, Indianapolis, 1907; aged 48; member of the Ohio State Medical Association and Fellow of the American Medical Association; died in the Methodist Hospital, Indianapolis, November 22. Dr. Smith made his home in Middletown, to which city he came in 1911 after a three year internship at the Deaconess Hospital of Jeffersonville, Indiana. Since 1915 he had been chief surgeon for The American Rolling Mill Company. He leaves his wife and two small children.

Luman P. Sturtevant, M. D., Cleveland University of Medicine and Surgery, 1874; aged 74; died at his home in Conneaut, November 10, from heart disease. Dr. Sturtevant was a practitioner of Conneaut for 46 years.

Theodore A. Weed, M. D., Cleveland College of Physicians and Surgeons, 1877; licentiate of the Royal College of Physicians, London, and the Royal College of Physicians, England, 1880; aged 63; died at his home in Lakewood, November 29, from heart disease. Dr. Weed had served as house physician at St. Alexis' and Charity Hospitals, and organized the medical staff at St. Johns Hospital, Cleveland. For many years he practiced with his brother, the late Dr. Frank Weed. Surviving are his wife and one son.

New Commander of O. N. G. Medical Corps

Because illness in his family made it impossible for him to give the requisite time to it the post of commander of the Medical Corps of the Ohio National Guard has been relinquished by Colonel Joseph A. Hall of Cincinnati, and Dr. Harry H. Snively of Columbus has been appointed to succeed him with the rank of colonel. Dr. Snively has had extensive military experience. Going abroad in 1915 he attained the rank of brigadier general in service in Russia before America entered the war, later served with the United States Army in France, and then with the Polish Army in its war with the Bolsheviks.

Unlimited Authority in Health Administration Calls Forth a Significant Policy On Part of Local Medical Profession

As an example of a situation which may develop through unlimited extension of official functions in local health administrations through a system which fails to consider the important position of the medical profession in the solution of health problems, the formal communication recently submitted to the Akron Board of Health by a committee of the Summit County Medical Society is of interest to the profession throughout the state.

While applied entirely to local problems, this communication states a number of general propositions as applied to local conditions more or less general, and states on behalf of one constituent group of the State Association, policies in regard to these matters.

The communication in full is here reproduced:

PROPER FUNCTIONS

"In formulating a constructive and harmonious plan of health administration we endeavor to set forth the several fundamental principles relative to the proper functions, scope, limitations and purposes of a health department.

(a) "We affirm that public health work, whether national, state or local, should be essentially educational and preventive.

"In this connection we respectfully call your attention to the fact that the medical profession is the only group that for years has consistently and properly worked against its own material interests in pointing out and helping to put into effect preventive measures against disease and bodily afflictions. The medical profession recognizes its duty in this respect and will continue to adhere to these principles. Because of its peculiar knowledge in these matters, however, it is entitled to the respect, confidence and consideration of public health officials, whose position, in the first place, is largely made possible by the medical profession.

"In other words, a public health official cannot expect to accomplish the best good in this community if he adopts a policy and spirit which, in action if not in words, expresses the thought: 'To hell with the medical profession.'

(b) "We are against giving free medical and nursing aid to the well-to-do, as is being done in this city, and charging it up to the taxpayers of Akron. We oppose anything which suggests state medicine.

"Neither time nor space permits a full discussion of this proposition. Suffice it to say, however, that, if carried to its logical conclusion, the public through taxation, will be paying for medical and surgical services rendered to its citizens irrespective of their ability to pay, so that instead of merely caring for those who cannot pay, these

very ones through taxation will be paying for service rendered to the wealthy and well-to-do.

MIGHT PROVIDE FOOD

"Carried further this policy might presuppose a plan to provide food and the other necessities of life, which are as essential as health, to the citizens through public funds. The fallacy of entirely destroying the personal relationship between patient and medical adviser in all instances is readily apparent. All reasonable objections to federal or state control of personal functions may be applied to our local problems.

(c) "We think the poor of Akron should receive the best medical and nursing service obtainable and that it should be free. In other words we favor properly conducted clinics.

"There is no doubt but that every citizen rich or poor should be entitled to the benefits of the most advanced and scientific service in the prevention and cure of bodily infirmities. For those who cannot pay properly conducted clinics should be provided and maintained.

(d) "We oppose absolutely allowing nurses to diagnose or treat disease. That is the doctors' province.

"If we believe at all in the necessity of study and preparation in the diagnosis and treatment of disease we cannot approve of the delegation of this function to those unqualified to render it. The nurse fills a proper and necessary field in attending the sick and injured under the direction of a physician. She has no qualification and no legal right to diagnose and prescribe. Any system which permits such abuses absolutely destroys the purpose for which public health administration is intended.

"For example, a health department, like that of Akron, which takes pride in the fact that so many hundred or so many thousands of cases have been diagnosed by nurses or attended by nurses alone within a given period cannot be other than woefully inefficient.

"When the chief nurse who is superintendent of the contagious hospital states that no physician has visited the hospital within a month, and that she had full charge in diagnosing, prescribing and treating patients suffering with infectious and contagious diseases, our present system of health administration proves itself to be impossible. And when the health commissioner permits such conditions, or worse yet, admits that he knew nothing of the condition, the inefficiency and irregularity of the health system in Akron should be apparent to all.

PAID ONLY BY CITY

(e) "We believe that the health director should

be paid solely by the city and should not receive any compensation from outside sources."

"It is perfectly obvious that any public health official who is subsidized directly or indirectly by individuals cannot be other than answerable to such individuals, rather than to the public whose servant he is and whom he is expected to serve. This proposition should require no elaboration.

"The innumerable cases which have come to the attention of this committee, and which, if you desire, can be assembled, prove conclusively the abuses and irregularities outlined above.

"It is generally known that nurses with the limitations outlined above and representing the policy of the health department, have overridden the judgment of physicians in the treatment of private cases brought into welfare clinics and of their cases of contagious and communicable diseases. Patients have been dismissed in such condition that they could and probably did transmit contagion to those about them.

"No system of efficiency can be secured as long as the department of health, for example, refuses to accept the certificate of qualified attending physicians on vaccination of children of school age and requires a supplementary certificate from an employe of the health department; or in cases of children ill with contagious diseases and ready to return to school, places the authority of a nurse, armed with a rubber stamp over that of the attending physician.

TOO MUCH ADMINISTRATION

"This committee is not made up of business efficiency experts but it is difficult for us to escape the conviction after looking over the last health budget, and having a general idea of the administrative work called for in a city of Akron's size that too much money is spent in 'general administration.' We simply record this as an impression and pass it up for verification to the city administrator and the proper council committees.

"The efficiency of the service rendered in the public venereal clinics may be seriously questioned. Many cases are treated on routine without proper analyses or other pathological tests. We cannot claim that our health department has even scratched the surface in endeavoring to control this most serious menace to the public health even among those who are unable to pay, yet it proposes to spend the taxpayers' money in giving free treatment to patients in fur coats who drive up to the public clinics in limousines. Some definite policy in this regard would seem to be the first requisite of any campaign for the control and prevention of disease.

"As a fundamental and necessary consideration we may safely assume that until and unless the health department desires and obtains the co-operation and counsel of the medical profession, our local health machinery will continue to be inefficient and incompetent."

Socialistic Experiment Fails in Cincinnati

One of the most pretentious experiments in social service work in the United States passed into history recently with the dissolution of the Social Unit in Cincinnati. After a rather tempestuous career of four years, the operations of the unit were curtailed by the paucity of funds and hereafter its work will be subdivided and pass under control of the various branches of the Council of Social Agencies which is financially supported by the public at large and centralizes charitable work.

A worthy purpose was defeated by a plan wrongly conceived; and the result was the repudiation of several self-confessed radical socialists.

The crowning blow to the unit was the complete failure of a recent campaign to raise funds for the continuance of the work, although \$25,000 was contributed by the citizens within the territory of the district in which the unit operated.

Originally the unit was financed to the extent of \$135,000 by interested citizens of Cincinnati and New York. The money called for a three-year programme. Mr. and Mrs. Wilbur Phillips of New York were the prime movers of the organization. As the basis of the experiment the promoters selected the Mohawk-Brighton district, one of the most congested sections of the city.

The establishment of health clinics was one of the fundamental steps of the unit. This found expression in the weighing and measuring of babies; the distribution of milk; free nursing, etc.

"Block mothers" also were chosen. These were to ascertain the most urgent needs of the families in the block which they lived, and report the various needs to the subsidiary councils having supervision. During the war when drives were numerous the unit conducted the campaign in its district.

Mayor Galvin expressed opposition to the unit. He designated it as a "government within a government" and declared that its tendencies and teachings were socialistic and Bolshevistic.

An investigation of the operations of the unit was made by the Council of Social Agencies and the inquiry did not add to the prestige of the unit. Some features of the work were severely censured by the council.

Congress of War Doctors

The Belgian embassy in Washington has announced that all doctors and pharmacists who belonged to the armies of the allied countries and the neutral countries will be invited to attend a meeting called by the medical corps of the Belgian army to organize an International Congress of Medicine and Pharmacy. The meeting is to take place at Brussels in June, 1921.

ACADEMIES AND COUNTY SOCIETIES

CLEVELAND

Lester Taylor, Secretary

The 165th regular meeting of the Cleveland Academy of Medicine was held in the Auditorium of the Medical Library November 19.

The program was opened with the presentation of a new tonsil instrument by Dr. Thomas E. Walker of Cleveland. Dr. Walker demonstrated his new instrument for the enucleation of the tonsil in selected cases, showing that it possessed the advantages of simplicity, lightness, ease of operation and ability to produce a practically bloodless field. Discussion by Dr. J. M. Ingersoll and Dr. Walker.

The guest of the evening was Dr. Hugh Cabot, professor of surgery at the University of Michigan. He took for his subject "Non-Tuberculous Infections of the Kidney with Particular Reference to Their Excretory Origin." He pointed out the over-emphasis which he felt had been laid upon the ascending infections of the genitourinary tract and advanced the theory that post-operative and catheter cystitis are the result of over-extension of the bladder rather than the introduction of organisms from the outside.

He advanced the theory of more or less constant elimination of bacteria through the kidney in all kinds of infectious processes. He also discussed the difference between the kidney infections which were due to pyrogenic organisms and those due to organisms of the color group. The indications for operative removal of the kidney were discussed.

The paper was presented in an extremely brilliant and forceful way and provoked an extensive discussion, which was participated in by Drs. Lower, Herrick, Karshner, Sanford and Gerstenberger, and was closed by Dr. Cabot. On motion of Dr. Lower, a vote of thanks was extended to Dr. Cabot for his interesting paper.

Attendance 165.

COLUMBUS

James A. Beer, Secretary

Program of December 13 meeting: "An Unusual Case of Colitis," E. V. Reutinger; "Multiple Fractures in New Born," A. M. Steinfeld; "An Unusual Intussusception," A. G. Helmick; "Choked Disc Following Measles," C. D. Postle; "Some of the Indications for Hysterectomy," J. F. Baldwin. Discussion by I. B. Harris, Yeatman Wardlow and Joseph Price.

SECOND DISTRICT

Darke County Medical Society held an enthusiastic meeting at St. Clair Memorial Hall, Greenville, December 9, attended by 19 members

In addition a paper on "Diphtheria" by Dr. G. W. Burnett and presentation of a number of case reports, the program included the annual reports of the president and secretary-treasurer. The society recently issued a unique statement summarizing the activities of the society during the past year, showing an average of 40 per cent., or 22 members attended each meeting and heard 24 essays presented. The statement shows the individual percentage of attendance at the year's meetings of every member.—B. F. Metcalfe, Correspondent.

Greene County Medical Society met, December 2, for its annual election of officers, which resulted in the choice of Dr. W. A. Galloway, Xenia, as president; Dr. F. W. Ogan, Jamestown, vice-president; C. H. Denser, Xenia, secretary-treasurer; R. H. Grube, Xenia, delegate, and H. C. Messenger, Xenia, alternate. Drs. L. G. Bowers and E. R. Arn of Dayton gave addresses that were replete with valuable suggestions, the former speaking on "Practical Hints in Surgical Diagnosis," and the latter on "Syphilis in Differential Diagnosis." The society is particularly proud of its attendance record of 50 per cent. during 1920.—Reyburn McClellan, Secretary.

Miami County Medical Society held its last meeting of the year, December 2. Dr. J. B. Barker, Piqua, was elected president for 1921; Dr. C. G. Ullery, West Milton, vice-president; Dr. G. J. Hance, Troy, secretary-treasurer; Dr. Gainor Jennings, West Milton, legislative committeeman and delegate; Dr. A. J. Bausman, Piqua, alternate; Dr. M. R. Haley, Piqua, censor.—G. J. Hance, Secretary.

Shelby County Medical Society has announced arrangements for entertaining the Miami County Medical Society on January 6, in accordance with the annual custom of the two societies. Officers for the new year, recently elected, are: President, A. W. Hobby; vice-president, Arlington Ailes; secretary, V. W. LeMaster; treasurer, B. M. Sharp; delegate, M. F. Hussey; alternate, George Martin; member of board of censors, Lester C. Pepper.—News Clipping.

THIRD DISTRICT

Allen County Medical Society met in bi-monthly session at Lima Memorial Hall, December 7, with 42 members present. Dr. Iva M. Lickly read a paper on "Anesthesia" which was followed by a good discussion. In the annual election of officers Dr. Charles H. Clark of Lima State Hospital was chosen president; Dr. J. B. Haines, vice-president; Dr. J. R. Tillotson, secretary; Dr. P. I. Tussing, treasurer; Dr. F. P. Stafford, censor.—A. S. Rudy, Correspondent.

Logan County Medical Society announces the election of the following officers for 1921: President, F. B. Kaylor; vice-president, C. K. Startzman; secretary-treasurer, M. L. Pratt; legislative committeeman, W. W. Hamer; delegate, E. R. Henning, alternate, W. C. Pay. All are resi-

dents of Bellefontaine. Last year the society enrolled 41 members. Three of these have moved away and one death has occurred.—M. L. Pratt, Secretary.

FOURTH DISTRICT

Defiance County Medical Society had as its guests on December 8, Drs. C. W. Moots and N. W. Brown of Toledo, who presented interesting and instructive papers which were thoroughly discussed. Dr. Moots' subject was "Endocrin-Gonad Dysfunction from the Gynecologist Viewpoint," while Dr. Brown's was "Pulsus Irregularis Perpetuus," illustrated by lantern slides.—D. J. Slosser, Secretary.

Fulton County Medical Society held its December 3 meeting at the Lyric Motion Picture Theater, Delta. The program consisted of a showing of public films on "The Treatment of Gonorrhea," "Venereal Diseases" and "Social Hygiene" from the State Department of Health; addresses by Drs. C. W. Moots and N. W. Brown of Toledo, and presentation of cases of fracture of the elbow and arm by Dr. P. S. Bishop. Officers elected for the ensuing year are W. L. Lathrop, Metamora, president; W. P. Evers, Tedrow, vice-president, and R. W. Reynolds, Fayette, secretary-treasurer.

Ottawa County Medical Society has re-elected its officers of the past year and faces the new year with the intention of holding meetings more regularly and announcing attractive programs in advance that will insure the participation of every member of the society. Guests at its November 11 meeting included Drs. M. Harpster, Toledo; C. R. Pontius and D. W. Philo, Fremont, and H. L. Sowash of Graytown, formerly of the staff of the Soldiers' Home, Sandusky. Drs. Pontius and Philo of Fremont gave short addresses on the best methods of securing attendance at meetings. Dr. Harpster read a paper on "Functional Diagnosis of the Kidneys" which was appreciated to such an extent that the author was given a vote of thanks and elected to honorary membership.—S. T. Dromgold, Correspondent.

Putnam County Medical Society met for its annual banquet, December 9, at the Hotel DuMont, Ottawa, with a good representation of its membership present together with a number of visitors from Allen County. The society was beautifully fed and enjoyed papers on "Medical News," by Dr. C. O. Beardsley, and "Cancer" (with stereopticon views) by Dr. Andre Crotti of Columbus. Dr. Crotti's paper was interestingly discussed by Drs. Frank Light of Ottawa, and O. S. Steiner, Herbert Thomas, and Harvey Basinger of Lima. Following the social and scientific sessions the society held a short business meeting which resulted in the election of Dr. P. D. Bixel, president; J. A. Harold, vice-president; H. A. Neiswander, secretary-treasurer; C. O. Beardsley, corresponding secretary; Frank Light and A. F.

Sheibley, legislative committeemen.—H. A. Neiswander, Secretary.

Sandusky County Medical Society held its November meeting at the home of its president, Dr. C. R. Pontius, on the 18th. Inasmuch as the public has shown some indifference in matters pertaining to public health, particularly the society's suggestions regarding the safeguard of vaccination, a motion was passed indorsing the publication in local papers of articles designed to stimulate vaccination. Dr. W. J. Gillette of Toledo, read an excellent paper on "The Present Status of Cancer." The high spots of the paper were, (a) his belief in the parasitic action as an etiological factor in its origin, and (b) the mistake of overlooking the distinct pre-cancer stage when frozen specimens are examined while the operator awaits an answer as to how wide his dissection shall be. In discussing the paper, Dr. F. M. Kent of Bellevue, commended the essayist but was inclined to scout the parasitic theory of etiology. A number of members took part in the general discussion that followed. Motion was passed electing Dr. Gillette, who was a member of Sandusky County Society many years ago when he first entered practice, to honorary membership.—C. I. Kuntz, Secretary.

FIFTH DISTRICT

Geauga County Medical Society completed its year's work at an enthusiastic meeting on November 4, at which every member paid his or her dues for 1921, making Geauga County the first to enter the one hundred per cent class. During the summer two well attended public health meetings were held under the society's auspices for the purpose of educating the laity in these matters. The one, held in June, was addressed by Dr. F. E. Bunts of Cleveland, while speakers at the other, held in September, were Drs. Brewster of Cleveland and Hopkins of Columbus, and Representative Griswold of this county. The regular meetings of the society throughout the year have been well attended and enthusiastic.—Isa Teed Cramton, Secretary.

Lake County Medical Society met in annual session in Painesville, December 6. The scientific part of the program was first taken up in the form of a timely and practical address by Dr. John Phillips of Cleveland, on "The Diagnosis of Acute and Sub-acute Conditions of the Abdomen." He said in part that the two most important things are the making of complete examinations, noting not only the condition of the heart, kidneys, lungs, etc., but whether the reflexes are normal or otherwise; and the securing of accurate histories of cases. He warned of the necessity of being on the lookout for "crises" in tabes, in all abdominal complaints, and explained differential diagnosis in gall bladder troubles, gall stones, pyloric stenosis, colitis, renal colic, floating kidney, appendicitis, gastric ulcer, duodenal ulcer, and intussusception. Routine business mat-

ters were then taken up and the nominating committee made its report as follows: For president, V. H. Tuttle; vice-president, W. Montgomery; secretary-treasurer, E. S. Jones; medical defense, T. M. Moore. A program committee was appointed to formulate programs for meetings in advance from January to May. The programs will be printed in a folder and each member will be expected to prepare a paper, or clinic, for some meeting during the year.—E. S. Jones, Secretary.

Lorain County Medical Society met at the Country Club, Lorain, on the evening of November 12. The meeting was in the nature of a get-together affair, attended by 36 physicians, including five from Huron and Sandusky. Dr. F. E. Bunts of Cleveland, presented a paper on "Empyema" which brought out a good discussion by Dr. W. B. Hubbell of Elyria; Dr. E. F. Smith of Lorain, and Dr. H. D. Peterson of Sandusky. Dr. Wm. H. Leet of Conneaut, gave an interesting account of his military service. On December 14, the society held its annual meeting and elected the following officers: Dr. John R. Pipes, Avon Village, president; Dr. G. D. Nicholas, vice-president; Dr. W. E. Hart, Elyria, secretary-treasurer; Dr. W. A. Pitzele, Lorain, delegate, Dr. C. V. Garver, Lorain, alternate.—W. E. Hart, Secretary.

SIXTH DISTRICT

Summit County Medical Society held its last meeting of the year on December 7, with a ninety per cent. attendance. The principal part of the program was occupied by the report of the society committee which met with the local health board to consider the function and administration of the health department. Following this the annual election of officers took place, resulting in the election of Dr. R. V. Luce as president; Dr. R. H. McKay, vice-president; Dr. A. S. McCormick, secretary-treasurer; Dr. T. D. Hollingsworth, treasurer; Dr. H. S. Davidson, legislative committeeman; Drs. L. E. Brown and D. H. Morgan, delegates.—U. D. Seidel, Secretary.

SEVENTH DISTRICT

Columbiana County Medical Society, meeting in Wellsville, December 9, passed a resolution endorsing the article on health insurance by Dr. Frederick R. Green which appeared in the December issue of the *Ohio State Medical Journal* and requesting the State Association to have copies of the article printed in pamphlet form and copies delivered to each member of the state Senate and House of Representatives. Dr. John Phillips of Cleveland, was with us and spoke for over two hours on "The Diagnosis and Treatment of Some of the Infectious and Contagious Diseases." Dr. Phillips covered typhoid fever, meningitis, scarlet fever and diphtheria. The members were delighted with his talk which proved intensely interesting and very helpful. Officers for 1921 were nominated and the election will take place on January 11.—J. M. King, Secretary.

Tuscarawas County Medical Society held its annual election of officers at a meeting in New Philadelphia, December 9. Dr. A. C. Dempster, Uhrichsville, was elected president; Dr. E. C. Davis, Dover, vice-president; Dr. Paul J. Alspaugh, New Philadelphia, secretary-treasurer; Dr. J. A. McCollam, Uhrichsville, legislative committeeman; Dr. J. E. Groves, Uhrichsville, medical defense committeeman.

EIGHTH DISTRICT

Athens County Medical Society combined its annual and regular monthly meetings in a session at the office of Dr. A. L. Pritchard, Nelsonville, December 7. At the business session the books were audited and approved and the following officers elected for 1921: President, Dr. W. D. Rhodes, Nelsonville; vice-president, Dr. J. F. Webber, Amesville; secretary-treasurer, Dr. T. A. Copeland, Athens, (re-elected); delegate, Dr. C. S. McDougall, Athens; alternate, Dr. A. L. Pritchard, Nelsonville. Case reports were given by Drs. W. S. Rhodes and N. Hill of Nelsonville, and Dr. S. Butt entertained with his usual contribution of poetry and prose, thoroughly enjoyed by those present.—H. M. Taylor.

Fairfield County Medical Society replaced its regular monthly meeting with a banquet at the Hotel Martens, Lancaster, November 16. The speaker of the evening was Dr. Charles S. Hamilton of Columbus, who presented the subject "Diagnosis of Borderline Surgical Conditions," in his usual clear style and thorough manner. The address was well received and greatly appreciated by the society.—C. H. Hamilton, Secretary.

Perry County Medical Society announces the election of the following officers for 1921: J. C. Sommers, president; J. P. Wortman, vice-president; C. B. McDougal, secretary-treasurer; N. T. McTeague, legislative committeeman.—C. B. McDougal, Secretary.

Muskingum County Medical Society held an interesting meeting at the Zanesville Chamber of Commerce, December 1. Drs. D. J. Matthews and M. A. Loebell rendered their annual reports as president and secretary-treasurer respectively, of the society, after which the following officers were chosen for the new year: C. U. Hanna, president; G. B. Trout, vice-president; M. A. Loebell, secretary-treasurer; C. O. Sellers, censor, D. J. Matthews, delegate, and E. R. Brush, alternate.—M. A. Loebell, Secretary.

NINTH DISTRICT

Pike County Medical Society, in session at Waverly, December 6, reorganized for the new year with Dr. F. C. Metzger of Waverly, as president; Dr. E. M. Dixon, Stockdale, vice-president; Dr. L. E. Wills, Waverly, secretary-treasurer; Dr. E. W. Tidd, Beaver, delegate and legislative committeeman. As president, Dr. Metzger succeeds Dr. O. C. Andre, who has rendered valuable service in this capacity, while Dr. Wills is re-elected to the secretaryship.

Social Program of Council on Health, A. M. A.

The House of Delegates of the American Medical Association at its meeting in New Orleans, directed the Council on Health and Public Instruction to make a report at the next annual meeting on the relation of the medical profession toward the public. At its meeting, November 11, the Council considered this matter and in doing so asked to sit with it Dr. Frank Billings of Chicago, Dr. Hugh Cabot of Ann Arbor, Dr. Wadsworth of the New York State Department of Health and Dr. F. E. Sampson of Creston, Iowa.

The Council considered the following subjects and took action as stated below:

1. The Council believes it highly desirable that the nature and transmission of communicable diseases should be taught in the public schools of the country. This is already a legal requirement in a few states. In other states such instruction is confined to tuberculosis. The secretary of the Council was requested to gather such information as he may be able to find bearing in this matter and to have framed a model bill for introduction into the legislatures of the states which do not already provide for such instruction.

2. The Council believes that teachers in our public schools should know something about the communicable diseases and what should be done with pupils under their charge developing these diseases. The Council believes that a course in epidemiology should be required in all normal schools and in schools of education in our universities; in short, that no one should be licensed to teach without having had instruction in epidemiology. The secretary of the Council was requested to have formulated a model bill bearing upon this subject.

3. The Council is of the opinion that there should be a closer cooperation between the medical profession and laymen who are interested in public health, and the Council recommends that sections on public health and sanitation be organized in state and local medical societies, and that laymen interested in public health be admitted as associate members of this society and referred to the sections. In the opinion of the Council, this matter should be discussed more fully at the next meeting of the Council in March, 1921.

4. In the opinion of the Council, it is highly desirable that the American Medical Association should, as soon as possible, begin the publication of a popular, up-to-date journal on sanitation and epidemiology, which should give to the public the latest, most complete and most scientific information concerning the prevalent and communicable diseases. It is the wish of the Council that this matter be referred to the Board of Trustees of the American Medical Association.

5. The Council on Health and Public Instruc-

tion believes that the American Medical Association should take steps to secure the following results:

(a) To assist local medical practitioners by supplying them with proper diagnostic facilities.

(b) To provide for residents of rural districts, and for all others who cannot otherwise secure such benefits, adequate and scientific medical treatment, hospital and dispensary facilities and nursing care.

(c) To provide more efficiently for the maintenance of health in rural and isolated districts.

(d) To provide for young physicians who desire to go to rural localities, opportunities for laboratory aid in diagnosis.

(e) The Council believes that these results can be best secured by providing in each rural community a hospital with roentgen-ray and laboratory facilities to be used by the legally qualified physicians of the community. The secretary of the Council was requested to study the laws of the different states bearing upon this subject and to prepare a model bill to be studied more fully at the meeting of the Council in March, 1921.

BOARD MEMBER RESIGNS

Dr. Edward Reinert of Columbus, medical member of the State Board of Administration, resigned January 1. He will go to New York to engage in post-graduate study of radium treatment, and upon his return will devote himself to special practice. He was appointed to the state board three years ago and his term would have expired in February, 1922.

Endowment Fund to Receive Splendid Gift

The General Education Board of the Rockefeller Foundation has announced its intention of contributing \$700,000 to the medical college of the University of Cincinnati. The gift is conditioned upon the raising of an additional \$400,000 to complete the \$2,000,000 endowment fund of the college. Nine hundred thousand dollars has previously been raised and an intensive campaign to secure the remaining \$400,000 was instituted on announcement of the intended gift, December 1.

In tendering the gift Mr. Abraham Flexner of the General Education Board stated that it was offered in appreciation of the great work of Dr. C. R. Holmes and also of the people of Cincinnati in building a superb hospital to serve the purposes of medical education in the Miami valley. "No other American municipality has done so splendid a thing. We gladly aid in a plan which should serve as an example for all cities. We feel that we can not do too much to further it. It is a great pity that Dr. Holmes did not live to see the fruition of his splendid efforts."

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MEDICAL COMMENT ❧ ❧ ABSTRACTS AND CURRENT TOPICS OF INTEREST

The following abstracts on gastric and duodenal ulcer are of interest in relation to the leading papers in this issue of The Journal.

Life Expectancy After Operations for Gastric and Duodenal Ulcers

THE *Medical Record* of January 17, 1920, in an editorial calls attention to a paper on this subject read before the American Surgical Association last June by Balfour (*Annals of Surgery*, November, 1919), in which he reports the results of investigations by the Actuarial Society of America, under the direction of Mr. Arthur Hunter, chief actuary of the New York Life Insurance Company, of all cases of gastric and duodenal ulcer operated upon at the Mayo Clinic between 1906 and 1915. As Balfour says, unfortunately there is no basis on which the results of the investigation can be compared with the results in non-operated cases, for not only are no statistics available as to life expectancy in non-operated cases of gastric and duodenal ulcer, but accurate statistics in this group will probably never be entirely possible, because the uncertainties of diagnosis discount more or less the dependability of such figures. On the other hand, surgical statistics are based on proved lesions, and on lesions in which the medical treatment has failed.

In these observations the results in the gastric and duodenal ulcer groups were compared; then each group's mortality was compared with that of a similar number of the general population corresponding in age and sex. Of 2,431 patients operated upon for gastric and duodenal ulcer between 1906 and 1915, all but 108 were traced—certainly a remarkable piece of work in itself. The average age at operation for gastric ulcer was: males, 47; females, 43; for duodenal ulcer, males, 44; females, 42. The operative mortality from all causes in 545 cases of gastric ulcer was 4.5 per cent.; while in 1,684 cases of duodenal ulcer it was two per cent. Gastric ulcer, therefore, carries twice the operative risk of duodenal ulcer.

Investigation of the mortality in the years following operation show the following facts: 521 gastric ulcer cases were under observation on an average of 3.6 years, and in that time 88 (17 per cent.) died from all causes; 1,651 duodenal ulcer cases were under observation an average of 3.4 years, and in that time 85 (approximately 5 per cent.) died from all causes, and 91 cases of both gastric and duodenal ulcer were under observation an average of 3.8 years, and in that time 9 (10 per cent.) died from all causes. In connection with these figures Hunter, as quoted by Balfour, says that, while we cannot tell how many lives have been saved by reason of operation for duodenal ulcer, it may safely be stated that the sur-

vival of 95 per cent. for three and one-half years after operation is a high tribute to surgery. With such a serious condition as gastric ulcer, a death-rate in three and a half years of 17 per cent. of those operated upon seems to be low. While unable to prove the statement, Hunter believes that a much larger proportion of persons would have died but for operation, and that many years of life in the aggregate were saved through surgical treatment.

The comparative tables showing the number of deaths in the group of 521 persons operated upon for gastric ulcer and 521 persons of the general population with like distribution as to age and sex give the following:

Time following operation.	Deaths in operation.	Deaths in general population.
First year	36	8.2
Second year	21	6.5
Third year	11	4.9
Fourth year	7	4.1
Fifth year	7	3.
Sixth year and subsequent..	6	5.6
	88	32.3

A similar comparison of the deaths in 1,651 duodenal ulcer cases operated upon shows:

Time following operation.	Deaths in operation.	Deaths in general population.
First year	22	24.
Second year	20	18.6
Third year	9	14.3
Fourth year	10	11.2
Fifth year	11	8.3
Sixth year and subsequent..	13	16.7
	85	93.1

In this last series it is rather astonishing to see that the total number of deaths in the first two years after operation is exactly the same as that of the general population group, and that after the second year the mortality is actually less than in the general population group. As Balfour says, these statistics illustrate very strikingly the fact which has always been recognized by surgeons, namely, that gastric ulcer is a much more serious condition than duodenal ulcer, not only from an operative standpoint, but from a standpoint of after-results; and that the patient with a gastric ulcer shows, as a rule, much more evidence of impaired general health than does the patient with duodenal ulcer.

The Results of Operation in Gastric and and Duodenal Ulcers

GEORGE WOOLSEY bases this paper in the *New York Medical Journal*, July 17, 1920, on a study of the results of operation in gastric and duodenal ulcer in 109 cases, operated on mostly during the last five or six years, up to December, 1919. Acute perforating ulcers are not included. A few of these 109 cases, principally those of gastric ulcer, for which gastro-enterostomy or excision was done, date further back, but are included for a comparison of results, as the writer has done relatively few operations of these types in recent years. In the group of gastric ulcer cases treated by gastro-enterostomy he included all private records going back to 1902. There are eighteen cases in this group, with no post-operative deaths, making a mortality of 2.6 per cent. for all cases of peptic ulcer in which a gastro-enterostomy only was done. The late results in these eighteen cases are known in fourteen, being excellent in eight, satisfactory in three, making 78.5 per cent. of good results. In the three cases marked unsatisfactory one patient when last seen four months after operation, gave an excellent report, but three months later wrote that she was hopelessly sick, without specifying in what way. Another patient was well for eight months when he began to have stomach symptoms at times, especially vomiting, but no gastric pains. He was operated upon again sixteen months after the first operation and the pyloric end of the stomach resected. Since then he has been free from gastric symptoms, but is still neurotic and has a peculiar pallor, though the blood examination is quite satisfactory. The third patient was entirely well for nearly three years, when gastric symptoms, with haematemesis, returned. On resecting the pyloric end of the stomach the stoma, made at the first operation, was found entirely closed, the only case of the kind the writer has encountered. In a group of twenty-six cases of gastric ulcer treated by resection of the stomach four patients died, a mortality of 15.3 per cent. Of the remaining twenty-two patients sixteen have reported the late result. Of these six gave an excellent result, seven a satisfactory, and three an unsatisfactory one, making 81.2 per cent of good results. In gastric ulcers situated at or near the pyloric end he performs resection, preferably by the Poly-Reichel technic. If the antrum is normal and the ulcer is three to four inches or more proximal to the pylorus he does a mesogastric resection. Where the ulcer is so far from the pylorus as to make this operation quite difficult, an excision, or the Balfour cautery method, with a gastro-enterostomy, is preferable. This group includes eight mesogastric resections with no deaths. Only five cases have been heard from and, after reoperation in one case and addition of a gastro-enterostomy, the satisfactory results comprise only sixty per cent.

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The Trend of Medical Legislation as Seen by a New York Physician

In the following article, Dr. George W. Whiteside, writing for the New York State Journal of Medicine, briefly summarizes the modern trend of medical legislation. Some of the problems which are most prominent at this time throughout the country are particularly applicable to Ohio conditions, and the writer correctly contends that their proper solution lies with the medical profession in exerting its influence in the right direction for the promotion of greater understanding and stronger cooperation.

The medical profession for centuries has had to protect itself against idle beliefs and painful delusions of the populace about it. In the past, these insidious influences that delayed the progress of man in his struggle against disease and untimely death have been conquered by the power of scientific truth—but as one picturesque and fantastic delusion has been routed, another has been welcomed and embraced. How foolish was the general belief in England among the people, as late as the time of Queen Anne, that the touch of Royalty would cure scrofula—yet this folly persisted despite its patent absurdity. The weapon ointment fallacy had no mean following among all classes of English society—its advocates seriously maintained that a preparation known as unguentum armarium would heal wounds upon its being applied to the weapon which caused the wound. Sympathetic powders were the vogue for some time and accomplished, it was claimed, mar-

velous cures of wounds by the simple application of the powder to the blood-stained garment which had previously been in contact with the wound. America has had its kindred delusions, possibly none more ardently propagated among the credulous than that devised by one Perkins. He was the originator of a simple device called a tractor, consisting of a strip of brass and one of iron which possessed therapeutic qualities that required a large volume of prose adequately to describe and the poet's muse picturesquely to praise. The tractors cost a shilling and sold for a guinea and cured every known ill. Though thousands of these Perkins tractors were sold and used, to-day you would have to search among the curios in a museum to find one.

Thus the royal touch, unguentum armarium, sympathetic power, Perkins tractor and various other false panaceas for human ills have had their day and held their sway among the ignorant and superstitious, only to meet an early death and find a resting place at last in the mortuary of dusty archives of history. Their heirs, however, are still with us and trace their lineage back to the same old progenitors—ignorance and superstition. We have the chiropractors who, with elaborate offices, paraphernalia and trappings, claim to cure all disease through the gentle pressure of the thumb upon the sufferer's vertebra. Their claims are based upon a thoroughly false and unscientific hypothesis. They proclaim

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and widely advertise their marvelous "cures" as evidence of the truth of their claims and have actually created in many quarters a definite, public sentiment supporting their propaganda. Many of these chiropractors decorate their walls with spurious diplomas, dishonor the worthy title of doctor and, in their lust for money, prostitute the healing art. We also have the cults that scorn the very existence of disease and assert that it is but a baseless fear in the mind of spiritually deficient man. To the latter the ravages of epidemics are but the evidence of a lack of harmony between the soul of the masses and their Creator.

The medical profession knows how false, hopeless, and in many cases harmful, these present-day delusions are and believe they will run their course and in due time pass on and be forgotten, as have their predecessors. Do you realize, however, that meanwhile the votaries of this false science have developed a formidable organization for proselyting purposes and that thereby they have created a demand for the "goods" which their healers have to sell? Professional efficiency and standards cannot be maintained in the medical profession by placing it under the wage plan. The physician is the servant not of his employer or of his patient, but the servant of the highest spiritual powers that regulate human life.

The compulsory health insurance scheme which has been before the legislatures of this and other states in recent sessions is represented by its sponsors as an ideal plan for furnishing to the wage earner medical service which they claim he is, under present conditions, unable to obtain or pay for. It is primarily an economic scheme for the distribution of the cost of sickness, but for the medical profession contains a most dangerous by-product.

This whole scheme for regulation of the cost of sickness of the wage earner and its economic distribution is built upon the assumption that the physician can be drafted into the ranks of its service and *made* to give that high character of personal sacrifice for humanity that has its main-spring only in *voluntary* effort—he cannot be *compelled* and he will not be compelled. The idealism of the physician that prompts him to succor the suffering and help the helpless cannot be meshed through mechanical manipulation by statutes into a purely economic industrial mechanism. Idealism is spiritual not mechanical—voluntary not statutory. So let those proceeding with their plans for *compulsory* health insurance legislation take notice!

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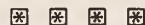
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EVENING REST

Last year the physicians of Darke County decided to take a rest during the month of August by closing their offices at 6:00 p. m. against everything but emergency cases. The plan worked out satisfactorily to all concerned and the doctors liked it so well that they have kept it up ever since. The idea is worth the consideration of other societies.

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OHIO PUBLIC HEALTH NOTES

Dr. P. Bruce Brockway, chief school inspector for Toledo, declares that the health of that city's 35,000 school children has shown remarkable improvement as a result of thorough medical inspection. Last year 42,000 examinations were made and anemics, tuberculars, children with goiters, and other boys and girls below standard were given proper medical care and restored to health. At Dr. Brockway's suggestion another physician was recently added to the school medical staff, making seven for medical and two for dental work. Plans are now being worked out through which pupils given work certificate will be examined after being engaged in their first employment to ascertain if the work is detrimental to their health.

—The Columbus venereal clinic has been transferred to St. Francis Hospital, where it is being operated under the auspices of the College of Medicine of Ohio State University and the State Department of Health. The city continues to pay the salary of a nurse and has turned over all equipment and apparatus formerly used, while

the remainder of the expense is assumed by the college and the State Department of Health.

—Dr. G. E. Robbins, health commissioner of Chillicothe, Ross county, has been unanimously re-elected for a term of two years at an increased salary by both the county and city boards of health. The county board will pay Dr. Robbins a salary of \$150 and the city board \$125.00 a month, representing a total increase of \$75.00 per month. Under the new arrangement Dr. Robbins will withdraw from private practice and devote full time to the health commission office.

—As an aid to the health of school children Health Commissioner Rockwood of Cleveland approves a proposal providing reduced car fare for school children. It is his belief that no child should be required to walk more than one half mile to school, and that since attendance is compulsory it is the duty of the city to place transportation within the reach of all.

—Springfield city council has granted a request of the Clark County Medical Society that local police recognize a physicians' automobile emblem copyrighted and controlled by the society, and exercise leniency in enforcing parking restrictions.

—Dr. C. M. Peters, Stark County health commissioner, has been reappointed for a term of two years, beginning January 1. The program

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which he has outlined for the year includes the establishment of health centers in Massillon and Alliance.

—At the invitation of the international health board, a commission from the ministry of hygiene of Czecho-Slovakia visited Columbus, December 27, to study the organization of the State Department of Health. The Columbus sewage disposal plant was also included in the inspection of the commission which is making a tour of the country to study sanitation and health problems.

—Classes in home nursing and personal hygiene at Waite High School, Toledo, are now housed in a new hospital room fully equipped for instruction and caring for injuries and illness. A registered nurse serves as instructor and has from 50 to 60 junior and senior girls every day in addition to an evening class which meets twice a week. Injuries and sick cases average 10 a day. The hospital equipment includes two beds, cabinet for surgical dressings and tools and a few medicines for emergency cases, as well as chairs and desks for the educational work.

—An ordinance recently innovated in Dayton providing for the inspection of all meats for human consumption proved successful during the first month of its operation. During the month 15,000 anti-mortem inspections of livestock were made, with the result that 35 head were barred as unfit for human consumption. In addition, 1,903 pounds of meat were condemned.

—Dr. Ross Hopkins is the new health director of the Columbus schools. Dr. Hopkins is a graduate of Johns Hopkins University and for the past two years has been connected with the State Department of Health. He is retained at an annual salary of \$3,600 and is the first full-time director ever employed by Columbus.

—A committee of fifteen was named to take charge of a crusade against cancer in Cincinnati at a meeting of physicians and health workers held at the home of Dr. Louis Ransohoff, December 1. Dr. Ransohoff is chairman of the committee and other physician members are Drs. Nora Crotty, Louis Schwab, Dudley W. Palmer, W. H. Peters, Robert Carothers, Mark L. Brown, J. E. Benjamin and Thomas P. Hart. The campaign is being conducted under the auspices of the city health department, the academy of medicine and the local public health federation.

—Reports from the Thalian Tuberculosis Dispensary, Toledo, for the first six months of 1920, just compiled, show that a total 1,575 cases were treated, including 428 new cases admitted and 1,147 returned for treatment. Of the cases discharged, 17 were non-tubercular, 39 arrested tuberculosis, 45 improved tuberculosis, 26 unimproved, and 49 died. One hundred and fifty-two cases were transferred to the tuberculosis hospital.

—The Dayton board of education has purchased a motor bus for conveying crippled children to and from school.

Narcotic Inventory

Early in January Ohio physicians will receive a communication from Mr. B. E. Williamson, collector of internal revenue, reminding them of the inventory of all taxable narcotic drugs in their possession which they are required to make annually as members of the group of narcotic taxpayers included in Class 4 of the narcotic law. Form No. 713 will be enclosed for their use in making this inventory, which must be prepared in duplicate and sworn to before a notary public

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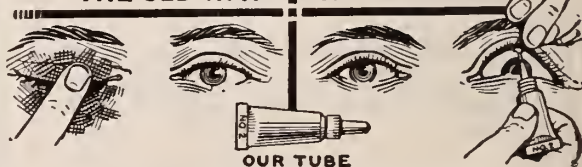
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or a deputy collector of revenue. The original copy should be retained by the physician and the duplicate forwarded to the office of the Collector of Internal Revenue, 11th District, Columbus, before June 30, 1921, or the delinquent physician will not be permitted to register under the narcotic law at the beginning of the next period.

Physicians who are numbered among the delinquent narcotic taxpayers will also receive notification in January that they have been assessed a 25 per cent. penalty in addition to the regular tax. For second delinquency there is a specific penalty in addition to the 25 per cent. penalty for engaging in business without filing a return as required by law.

NEW BOOKS

Psychopathology, by Edward J. Kempf, M. D., Clinical Psychiatrist to St. Elizabeths Hospital (formerly Government Hospital for the Insane), Washington, D. C.; author of "The Autonomic Functions and the Personality." Eighty-seven illustrations. C. V. Mosby Company, St. Louis. Price \$9.50.

Old at Forty or Young at Sixty, Simplifying the Science of Growing Old, by Robert S. Carroll, M. D., Medical Director, Highland Hospital, Asheville, North Carolina; author of "The Mastery of Nervousness", "The Soul in Suffering", "Our Nervous Friends." The Macmillan Company, New York. Price \$2.25.

Practical Dietetics, with reference to diet in health and disease, by Alida Frances Pattee, graduate Department of Household Arts, State Normal School, Framingham, Mass., former instructor in dietetics, Bellevue Training School for Nurses, Bellevue Hospital, New York City, former instructor at Mount Sinai, Hahnemann and the Flower Hospital Training School for Nurses, New York City; Lakeside, St. Mary's Trinity and Wisconsin Training School for Nurses, Milwaukee, Wis.; St. Joseph's Hospital, Chicago, Ill.; St. Vincent de Paul Hospital, Brockville, Ontario, Canada. Revised to meet the requirements of state boards of examiners of nurses and to incorporate the latest results of research in dietetics. Latest diet lists of leading physicians and hospitals are given. Supplement of state medical board requirements and examination questions in dietetics given complimentary with each copy. Contains: Part I, principles of nutrition and food preparation; Part II, practical application of principles of nutrition (recipes); and Part III, hospital dietaries, diet in disease, diet in special conditions. Thirteenth Edition Revised, 12 mo. cloth, 543 pages, price \$2.25 net, postpaid.

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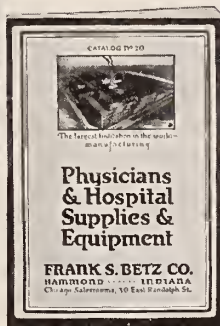


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Interesting Causes of Death and Birth Rate Shown by Annual Report of Vital Statistics Bureau

Few persons outside the medical profession realize the importance of the work done in the State Bureau of Vital Statistics. This is, in fact, one of the most interesting of all departments of state government. Its opportunities for good in collating mortality statistics and assembling comparative causes of death, which form the basis for much of the disease prevention and health conservation work in the state, are unlimited.

It is the intention of Dr. U. G. Murrell, registrar of the Bureau of Vital Statistics, to make the records of his office for 1921 as nearly one hundred per cent. as possible. The bureau has established for Ohio a record unequalled by any other state in the Union, but on account of the delay and laxity on the part of a comparatively few physicians there have been a number of violations of the law relative to the prompt reporting of births. For example, there was a thirty-five per cent. delay in reporting the 71,654 births which occurred in Ohio during the first seven months of 1920.

It was with considerable reluctance that Dr. Murrell recently prosecuted several physicians in various parts of the state for failure to observe the legal requirements in birth registration.

While he hopes, as far possible, to avoid stringent action in the future, he is determined to make the data of his department of maximum value, and this can be accomplished only through the unstinted cooperation of the physicians of the state in complying with the requirements for prompt reporting of births and deaths.

The bureau has just completed a tabulation of statistics for the year 1919 which reveals some surprising facts and permits of interesting comparisons with previous years and the early part of 1920. For instance, the age period at which the greatest number of deaths occurred in 1917 was between 70 and 74 years; in 1918, it was between 25 and 29, and in 1919 returned to the 70-74 period. This variation is explained by the influenza epidemic in 1918, which exacted a heavy toll of young lives, and particularly of young men stationed in Army camps.

The figures show that the total number of births in 1918, 23.6 per 1,000, decreased to 107,633, 18.8 per 1,000 in 1919. Twenty-four counties and sixty-four cities showed a decrease in the number of births reported in 1919. Among the counties, Mahoning County, led with a birth rate of 28.5, and Geauga stood last with a rate of 13.1,

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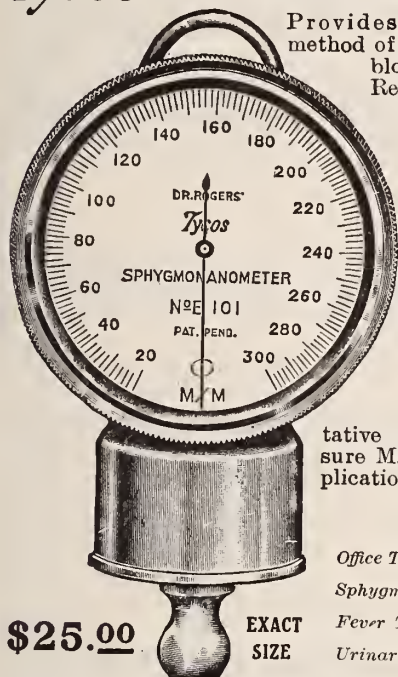
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while Youngstown topped the list of cities with a rate of 30.0, and Cleveland Heights had the lowest rate, 4.7.

There were 72,592 deaths reported during the year 1919, as compared with 93,965 in 1918, the rates being 12.7 and 17.8 per 1,000, respectively. This represents a decrease in all the groups included in the International List of the Causes of Death. The smallest decrease occurred in diseases of the skin, which was .51 per 100,000, and the greatest decrease took place in general diseases, which was 245,000 per 100,000. This group contains the epidemic diseases, and shows a decrease in all except diphtheria in which there was an increase of 1.8. Influenza took the largest drop, the decrease amounting to 83.8.

There were 311 fewer deaths in 1919 from typhoid fever than in 1918; 82 less from smallpox, 73 less from scarlet fever, and 440 less from whooping cough. Organic heart disease of the heart was responsible for more deaths than any other one disease, but here there was a decrease of 922 from the preceding year. Tuberculosis in all forms was next in order, being given as the cause of death in 6,542 instances, a decrease of 1,107 from the number recorded from this cause in 1918.

Gallipolis headed the list of cities with a rate of 20.1, and East Cleveland's rate of 8.6 was the lowest. Adams County produced the highest rate (15.6) among the counties, and Carroll County was last with 9.4.

The grouping of deaths under other subdivisions is interesting. Of the total number of 72,592 deaths reported in 1919, 38,397 were male and 34,195 female; 68,787 were white, 3,777 black, 24 other colors, and two were unknown; 28,987 were single, 29,305 married, 13,052 widowed, 667 divorced, and in 581 instances the conjugal condition was unreported. As stated above, the age period at which the greatest number of deaths occurred was from 70 to 74 years, with the period from 75 to 79 a close second. There were 10,159 deaths under the age of one year, and 14,007 under five years, while 197 deaths over 95 years were reported.

As the compilation for 1919 was based on the 1920 census and the calculation that there has been an annual increase of 102,204 in the population of the state during the past ten years, the rates shown should be of much value to health organizations of the state.

During the first nine months of 1920 the average number of deaths reported was 6,780 per month. The greatest number of deaths reported for any one month was for the month of February, when there were 11,450, due to the prevalence of influenza in the early part of the year. August represented the low tide of this period.

There is food for thought in the data on sleep-

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ing sickness found in the 1920 statistics. One hundred and ten of the deaths reported in the first nine months of 1920 were attributed to this cause, as compared with 28 during the entire year of 1919. Of these 110 deaths, 58 were male and 52 female; 61 were married, 45 single and 4 widowed.

The figures indicate that sleeping sickness has no respect for age, for in every age period from under one year to 84, there are deaths recorded from this cause. However, the greatest number in any period was from 35 to 39, in which 13 deaths are noted. Ten of the sleeping sickness deaths occurred in persons over 60 years of age, a period in which the female predominates, as there were one male and nine female deaths.

Health at O. S. U.

Figures just announced at Ohio State University concerning 1,555 young men enrolled in the department of physical education show that only 122 of them, or seven per cent., are "A" men—those who have a good degree of muscular development, slight physical defects, and are organically sound. Ninety-two per cent. of them have defective muscular ability or faulty postures.

It is notable that the percentage of men needing dental work has been decreased, due largely to the educational campaigns. Of the 1,555 men examined only 1.4 per cent. have decayed teeth.

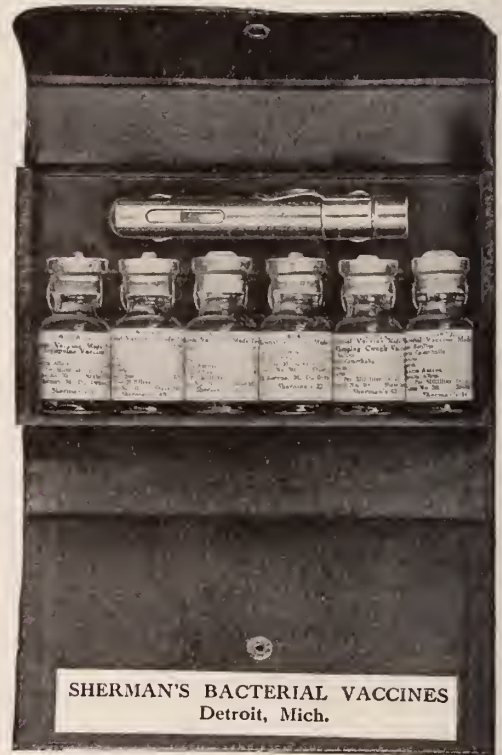
On the whole the tests of these young men, considered above the average physically, indicate that early examinations should be made in order that slight defects which ordinarily cause little or no trouble and which are usually unnoticed may be detected.

Dr. H. Shindle Wingert, of the Students' Health Service of the University, says that seventy-five per cent. of the illness among students, which comes to his attention, is preventable.

Since the opening of the present school year 1,064 students have been treated—923 men and 141 women. An unusual number of digestive disorders have been treated. This is partly due, it is thought, to irregular eating habits and poor choice of foods, and to remedy the situation periodical inspection of public boarding houses and restaurants in the University district is being considered.

An investigation to determine the cause of the prevalence of furunculosis among male students is under way.

The Supreme Court of Wisconsin has held that the eugenic marriage law of that State, which requires a male applicant for a marriage license to obtain a certificate of freedom from venereal disease, has no extraterritorial effect, and is, therefore, not applicable to marriages contracted without the State.



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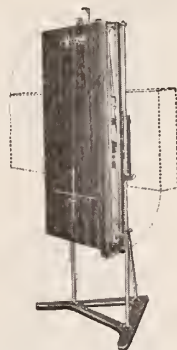
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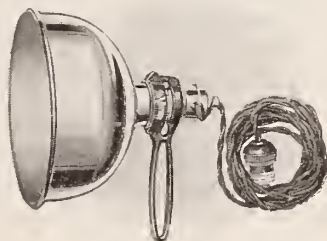
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NEWS NOTES OF OHIO

Cincinnati—Dr. Charles T. Souther of this city was elected president of the Ohio Valley Medical Association at the twenty-first annual convention of the organization held in Evansville, Indiana, recently.

Wooster—Dr. S. A. Crabtree has moved from this city to Lynchburg, where he has taken over the practice of Dr. J. Barrett Kleckner who has gone to New York City.

Ironton—Dr. Daniel J. Webster received slight injuries when his automobile collided with another machine here recently.

Cleveland—Dr. Francis B. Norton has resigned as police surgeon of this city after 34 years' service in that capacity. During this period the number of policemen under his care increased from 192 to more than 1,000.

Springfield—Dr. William Ultes explained the operation of the X-ray to members of the Lions' Club in session at the Shawnee Hotel, December 2nd.

Mansfield—Dr. Stephen A. Douglass, former superintendent of the Ohio State Tuberculosis Sanatorium, Mt. Vernon, has opened offices here. Dr. Douglass recently returned from the east where he engaged in post-graduate study.

Cincinnati—The marriage of Dr. David Lillard of this city and Miss Charlotte E. Bridge of Franklin was solemnized November 25.

Bucyrus—Dr. J. J. Martin withdrew from general practice, January 1, to become full-time health commissioner for the rural health district of Crawford county. He formerly filled this position on a part-time basis.

Toledo—Correction is made of the statement carried in this column in the November issue, that Dr. A. F. Holmes, a former resident of Athens, has assumed the duties of assistant superintendent of Toledo State Hospital. Dr. R. E. Bushong holds this position, while Dr. Holmes has become a member of the medical staff.

Alliance—Dr. P. C. Ramsey is reported convalescent from a stroke of paralysis suffered November 30.

Cleveland—News is received of the death of Dr. John C. Ferbert, aged 49, in Los Angeles in early December. He was a native of Cleveland but had resided in Los Angeles since his graduation from the University of California.

Oberlin—Dr. L. F. Trufant of Gorman, Texas, has taken over the practice of the late Dr. W. F. Thatcher. Dr. Trufant is a graduate of McGill University, Toronto.

Toledo—Dr. Philip M. Johnson, negro physician, arrested by federal narcotic inspectors in late November, was bound over to the grand jury, December 4, with bond set at \$20,000.

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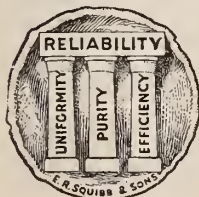
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½ c. c. and 1 c. c.
ampoules, 6 in box.

Pituitary powder
and tablets. Anterior
Pituitary Powder
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Corpus Luteum
(true) powder and
2 and 5 grain Tabs,
and 2 and 5 grain
capsules.

Pepsin, U. S. P.
scale, granular and
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ELIXIR ENZYMES is a palatable preparation of the proteolytic and curdling ferments that act in acid medium. It is recommended as an aid to digestion and as a gastric tonic generally.

Elixir of Enzymes is of special service in correcting faulty proteid metabolism which is one of the principal causes of autointoxication.

Elixir of Enzymes is an excellent adjuvant and vehicle for exhibiting iodids, bromids, salicylates and other drugs that disturb the digestive functions. One dram of Elixir Enzymes will carry 46 grains of potassium iodid or 45 grains of sodium salicylate or 17 grains of potassium bromid.

Elixir of Enzymes contains the curdling ferment and may be used for making junket or curds and whey. Add one teaspoonful of the Elixir to half pint of lukewarm milk, stir thoroughly and let stand till cool.

For minimizing the organic disturbances and eliminating the corrosive effect of potassium iodid on the mucous membrane of the stomach as well as disguising the taste, the following combination is recommended:

Potassium Iodid, 2 ounces.

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To exhibit, for instance, 20 grains of potassium iodid three times daily, use one teaspoonful of Elixir of Enzymes, one teaspoonful of the above solution to half pint of lukewarm milk; stir thoroughly and let stand until cool. Take one-third of this quantity as a dose. This junket should be made up fresh every morning.

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CLOSE PERSONAL ATTENTION IS THE MOTTO OF THE INSTITUTION.

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COMPLETE X-RAY DEPARTMENT AND LABORATORY.

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EDITORIAL COMMENT

By D. K. M.

Periscoping the Legislature As It Sets Sail For a New Session

With the convening of the Eighty-Fourth General Assembly of Ohio on January 3, it is considered opportune to outline in a general way a number of the proposals which are most likely to develop as real legislative issues in the near future, and in which the medical profession is directly interested.

Upon medical science and its encouragement depends the health, happiness and efficiency and even to a large extent the progress of mankind. The medical profession always has and always will recognize its obligation to humanity not only in the treatment and cure of bodily ills but as leaders in all movements to safeguard the public against disease. It has and will continue to point the way to sane and scientific means for the prevention of illness and to the preservation of health. The average span of life has been lengthened over a decade during the past 50 years; bubonic plague and smallpox are scarcely more than hideous memories; typhoid, tuberculosis and cancer are gradually retreating as a menace; hundreds of ailments are less dreaded and more readily banished, because of medical science.

In return the medical profession, which while alleviating human suffering through material loss to itself, has a right to the confidence and respect of the state and its citizens. In all public health, welfare and social problems, where its peculiar knowledge is especially valuable the medical profession not only has a right to be heard but public officials and law-makers should be willing and anxious to consult with its leaders and spokesmen.

Yet many proposals for legislative action either because of ignorance or malice are either vicious and vindictive or foolish and futile. Some, however, are constructive, practical and worthy.

Perhaps due in a measure to the enfranchisement of women and more directly due to the flux, changes and modifications of social and economic relations during the present period of readjustment, there is an unusually large number of suggested proposals dealing with health, welfare and especially with the relation of women and children to community and industrial life. Some of these, insofar as the object to be secured is concerned, have merit, but many of which are radical and complicated and contemplate unprecedented large appropriations from public funds.

The law-makers not only in Ohio but in Federal Congress have felt the pressure through emotional appeal from various interested and ingenuous groups and only guidance and conservative counsel will prevent the ship of state

from grounding on the shoals of governmental bankruptcy.

In the succeeding paragraphs an effort is made to summarize briefly the main proposals now being advocated by various agencies and which in greater or less degree affect the medical profession and the practice of medicine. It is probable that by the time this is published several of the proposals in some form will have been introduced in the legislature.

Chiropractic

It may be portentous that the chiropractic proposal submitted automatically to the legislature on initiative petition in the House of Representatives on January 4 was given the significant title of "Initiated House Bill Thirteen," because of its numerical order of introduction. It is unfortunate that among the first crop dumped into the legislative mill is this pernicious and destructive proposal.

Readers of *The Journal* should be familiar with this bill through references and explanations appearing in these columns in months past. It is the hope of the chiropractors to have this proposal enacted if possible by the legislature; and if unsuccessful, to take it to the voters on a ballot at the next general election. The bill was introduced on petition of three per cent. of the electors on an initiative petition. When and if the bill is defeated by the legislature, as it should be by all means, it will require an additional three per cent. of the electorate as signers before it can go on the ballot.

The chiropractic cult appears to be more determined than ever to pass the bill. It may be assumed that after many thousands of dollars have been expended by the "chiro's" in propaganda and in securing signatures to the petition, nothing will be overlooked by them in an effort to pass the bill.

In addition to the fact that there are already sufficient proper means for the licensing of chiropractors who possess even fairly reasonable qualifications, it is almost unthinkable that intelligent legislators should be disposed to grant special privileges to a cult which attributes from 90 to 95 per cent. of all bodily ailments to one cause and which brazenly claims to "remove the cause" through spinal "adjustments" alone.

Civic and health organizations have apparently become enlightened on the dangers and fallacies of the chiropractic bill and in a communication to legislators the Ohio Public Health

Association has pointed out reasons why the proposal must be defeated. As conclusive reasons for its rejection, the Public Health Association says:

"1. The chiropractic initiative is based on the false pretense that the present Ohio State Medical Board is unqualified to examine chiropractors, even with the assistance of examining committees of this particular school of practice. All reasonably competent applicants can now secure licenses by taking examinations and complying with lawful requirements.

"2. The chiropractic initiative is promoted by chiropractic colleges and groups of advertising specialists who declare that chiropractic contains unlimited possibilities for great financial success. If granted the power to license themselves, regardless of educational qualifications, great financial success may be won at the expense of the sick.

"3. The welfare of the public is best protected by one responsible board. The membership of the present board can be changed whenever necessary or desirable. The courts can review and reverse the board's decisions. From such a well-regulated board as Ohio has at present all applicants are assured of ample justice and the public of adequate protection.

"4. There are almost innumerable cults, chiropractic being only one of them. If chiropractors are granted a special board the other 'fifty-seven varieties' are equally entitled to special boards. With such a multiplication of licensing boards the state would lose proper control and could not protect the lives and health of its citizens from the incompetent, unskilled and unscrupulous.

"5. From the standpoint of the public, a most serious objection would be the legalizing of practitioners of insufficient qualifications who might with impunity treat infectious, contagious and venereal and other diseases of which they are not even cognizant, and would authorize the signing of death certificates and permit the filing of causes of death by those who have no knowledge or means of ascertaining such causes.

"6. The enactment of the chiropractic proposal would make the morbidity statistics of the State Department of Health valueless and a system of vital statistics a joke.

"7. The health of the people is so fundamental and the obligation of the state so clear that neither should there be a multiplication of licensing boards for practitioners or healers of the sick, nor should the present licensing system be submerged in any plan of combining the State Medical Board with other and unrelated licensing systems. The identity of the State Medical Board as such should be retained and not combined, as has been suggested by a few people, with such unrelated professions as law, engineering or accounting.

"8. If there is to be any modification in the educational standards of those who treat the sick,

it should be a raising and not a lowering of requirements. One educational standard should be established for all, regardless of the method used by the individual practitioner. Such a qualification should consist of—first, at least two years' work in an approved college of arts and sciences; second, four years in a reputable scientific school; third, written and practical examinations given by the one board, as at present, in the several fundamental subjects previously enumerated, and special examinations in the branches of limited practice for which the certificate is sought and given by a committee from that particular school of practice.

"9. The initiative proposal is burdened with so many dangerous possibilities, with so many inconsistencies; and it would raise so many legal and constitutional questions that *it would be extremely unsafe to enact it even in any amended form.*"

Anti-Vaccination

As a further evidence of the animus which actuates the cults, the chiropractors and others have been planning to introduce an anti-vaccination bill, to be sponsored by the so-called "League for Medical Freedom" which has been operating in some of the other states. The non-medical aggregation appears to have committed itself to a program and propaganda for "destruction" and from certain evidences it has secured several "converts" from among the less scrupulous or less intelligent of the legislators.

Similar in purpose to those anticipated for introduction in Ohio, two initiative measures—the antivaccination constitutional amendment and the proposed antivivisection act—both menacing the public health, were defeated by the people of California at the election last November.

The antivaccination amendment declared that "No form of vaccination, inoculation, or other medication shall hereafter be made a condition for admission to or attendance in any public school, college, university, or other educational institution in this state, or for the employment of any person in any public office. The provisions of this section shall not be controlled or limited by any other provision of this constitution." This measure was actively opposed by the universities, medical schools, the state tuberculosis society, state and city boards of health, and many other influential organizations, as well as by the practicing physicians throughout the state.

The votes on these measures were as follows:

Antivaccination	359,987	468,911
Antivivisection	272,288	527,130

A proposed constitutional amendment abolishing compulsory vaccination, similar to the California measure, was defeated in Oregon by a vote of 2 to 1, the final count being 63,028 for and 127,238 against.

This decisive vote is interesting in view of the fact that the proposed amendment was much more far-sweeping than a similar measure voted on four years ago, which was defeated by only 400 votes. A vigorous campaign against the amendment was carried on by a joint committee of physicians and laymen.

Are Physicians Not Qualified as Health Officers?

Perhaps the most ludicrous proposal suggested by the cults and hostile interests is a measure which will probably be introduced and which would provide that no physician could be elected or appointed to a position as health commissioner or as a member of a board of health. The pernicious animus of the cults is readily apparent in such a suggestion, which undoubtedly will be laughed out of the legislature.

Health Insurance or State Medicine

At the recent holiday conference of The American Association for Labor Legislation in New York City, the proponents of health and social insurance urged that such bills be introduced in all the states where there was any chance of passage. A short time ago Ohio was not included in the program of activities of that organization for 1921, but present indications point to the possible introduction of a proposal similar in its main provisions to House Bill No. 517, introduced last session for propaganda purposes.

Since the general session devoted to health insurance or state medicine at the last annual meeting of the Ohio State Medical Association, the members of the profession in Ohio have become well informed on this issue. Dr. Green's comprehensive article was published in the December issue of *The Journal*. The special attention of county society committeemen was called to this article. Reprints have been secured and are available for distribution to members of the legislature at the proper time.

Reorganization of Licensing System

It is unnecessary to go into detail on this issue which has been discussed repeatedly in *The Journal*. The Joint Legislative Committee on Administrative Reorganization failed to agree on a great many of the suggestions for reorganizing state departments. It can be said with a certain degree of confidence that it is unlikely at the present time that a dangerous effort will be made to abolish the State Medical Board, although within the past few weeks efforts have been made by hostile interests either to insist on a combining of all licensing bureaus or to advocate the formation of numerous separate licensing boards. This proposition is so important that it will be watched constantly.

The administration is pledged to conservatism on this issue. It is readily apparent that the licensing of those who treat the sick has no place in a hodge-podge bureau with numerous unrelated professions such as law and accounting. Neither would the abolishment of the State Medical Board conform to a policy of "efficiency and economy." It is already more than self-supporting. It will be remembered that the last annual report of the State Association's Committee on Public Policy and Legislation (published in the June, 1920, *Journal* and adopted by the House of Delegates) pledged vigorous opposition to a change from the present licensing system.

Prescriptions in English

An unadulterated case of malice and vindictiveness appears to be behind the suggested proposal to require all physicians' prescriptions to be written "only in the English language." Perhaps there would be little objection from physicians on this issue except that many original and derivative designations are either Latin or botanical and are so used in all scientific works. In fact it is probable that there would be more danger of mistakes in filling prescriptions or in making them clearly understood if all of them were required to be entirely in English. At any rate exactness and accuracy might be sacrificed.

Christian Science

The Christian Scientists are especially confident of having enacted their favorite proposal to exempt Christian Science healers from the provisions of the Medical Practice Act. "Scientist" members of the legislature are planning to introduce a bill similar in its main provisions to the one which was defeated last session.

Conforming to its policy announced two years ago, the medical profession feels that the responsibility rests with the public's representatives, the legislators, of legalizing a system which ignores disease. Aside from the probable lack of health protection contemplated in this measure it is not likely that the legislature through legal enactment will place its approval on the superior efficacy of the one sect's prayers over all other kinds and degrees of communion with Providence.

Anesthesia

The enactment of House Bill No. 214 by the 83rd General Assembly legalizing the administration of anesthetics by registered nurses has precipitated a far-reaching problem. Pursuant to action of the Council of the State Association a special committee on anesthesia has undertaken a comprehensive survey for the purpose of securing facts and information on this question.

At the last meeting of Council held in Columbus on January 2, the Committee on Public Policy

(Continued on page 117)

The 1920 State Meeting

If advance preparations for a convention may be taken to forecast its success, the next annual meeting of the State Association in Columbus on May 3, 4 and 5, is due to be a prize-winner. Dr. Sylvester J. Goodman, councilor of the Tenth District and general chairman of the program and other state meeting committees, is the busiest person in the world, Warren G. Harding excepted. He has drawn about him as members of the local committees on arrangements a group of hustlers from the Columbus Academy of Medicine that is sure to put the meeting "over" in the finest style possible. Here they are:

Reception.—G. C. Schaeffer, president Columbus Academy, chairman; J. F. Baldwin, Chas. F. Clark, R. B. Drury, Emilie Gorrell, C. S. Hamilton, W. J. Means, E. F. McCampbell, T. W. Rankin, E. J. Wilson, Howard Whitehead.

Entertainment.—C. W. McGavran, chairman; Wells Teachnor, J. H. J. Upham, Andre Crotti, Joseph Price, P. D. Shriner, J. M. Thomas, Grace Welch.

Badges.—J. B. Alcorn, chairman; Hugh Baldwin, Verne A. Dodd.

Exhibits.—Fred Fletcher, chairman; Don K. Martin. **Scientific Exhibits.**—H. J. Means, F. G. Boudreau.

Registration.—H. M. Platter, chairman.

Projection Apparatus.—Charles F. Bowen, chairman.

Halls and Meeting Places.—A. Timberman, chairman (General and E. E. N. and T.); Ben Kirkendall (G. U.); W. D. Murphy, (Medical); E. H. Ryan (Obstetrics and Pediatrics); E. M. Freese, (Surgical); Earl Gaver, (Nervous and Mental); E. R. Hayhurst, (Hygiene and Sanitary Science).

Golf Tournament.—J. J. Coons, chairman; Earl Gaver, C. W. McGavran, H. B. Blakey, C. H. Hoffhine.

Those who are in the habit of attending the annual meetings of the State Association will agree that the Columbusites will have to set a rapid pace to take honors from their Cleveland, Cincinnati, Springfield and Toledo brothers in previous years; but that is the avowed intention of the 1921 committees and every member of the Association should try 'em out. If you are an old hand at the meetings you won't miss this one; if not, make the Columbus meeting the occasion of your debut and you will not regret it.

An Advertising Policy

Many newspapers, magazines and other periodicals might well follow the example of the *American Legion Weekly* in adopting a policy against misleading, fraudulent, and immoral advertising.

Among the classes of advertising which the *Legion Weekly* declares it will not accept are:

Advertisements offensive to moral standards or sentiments.

Objectionable medical advertisements of such nature that claims are made not in accordance with facts or experience.

Advertisements of products which contain drugs of a habit forming nature—dangerous to health.

That publication makes the correct statement that its advertising columns should be as carefully guarded as its editorial and news departments.

It states concisely that its "columns are open to the honest advertiser and shut fast and tight to the dishonest one."

Progress of Public Health

Because of the experiments being made in Great Britain with a number of politico-social problems, statements of the British press on health questions are particularly interesting. Intimation of "too much government" is found in a recent editorial in *The Manchester Guardian*, in which a statement appears to the effect that "one comes every now and then on heartening evidence that multiplicity of authority and overlapping of function are being reduced under the new regime and that a more efficient health machine than we have yet had is emerging."

The editorial is summarized in the following conclusion: "Clearly the need for education and a wise propaganda is as imperative as that for clinical facilities."

By developing this thought a trifle further it may be concluded that as a governmental function public health administration, local, state or national, should realize the limits of its field and confine itself largely to preventive measures and to educational propaganda. There seems to be an inclination on the part of such officials to work for the extension of the state's function in the fields now properly filled by private medical practice.

The same tendency is voiced editorially in an issue of *The Illinois State Medical Journal* in these words:

"We have repeatedly called attention to the fact that in nearly every instance where a physician succeeds in getting placed on the pay-rolls of a corporation, municipality, state or government, he automatically develops a warped viewpoint of the rights and necessities of his fellow doctors and is always ready to kick from under him the ladder by which he climbed to fame and fortune."

If your 1921 dues are unpaid, doctor, you are temporarily without medical defense protection, and your name is slated for early removal from The Journal mailing list.

Blood Chemistry and Other Laboratory Tests in Nephritis

J. J. Coons, M. D., Columbus

Editor's Note.—In dealing with the utility and scope of blood chemistry and other laboratory tests it is essential for the practitioner to have a clear conception as to whether he has to combat acute or chronic nephritis. Whether of metabolic or infectious origin the results of nephritis are a general or patchy arterio-sclerosis and the symptoms are referable to the organs and structures affected. Hence it is that specialists may find evidence of nephritis when it is overlooked by the internist unless a very thorough examination has been made. Blood chemistry at the present time implies the estimation of the non-protein nitrogenous blood constituents and an evaluation of kidney function based on the retention of one or more of these elements, varying in amount with the severity of the kidney lesion. Far too many urines are left to the office girl or to a student for examination. The practitioner who develops a personal interest in blood chemistry and urine tests will find himself benefitting his patients far more than by relying on some one else's interpretations.

IN taking up the subject of the relative value of blood chemistry and other laboratory tests in nephritis, we must consider the picture that comes into the mind of the physician when the term "nephritis" is used. We all use the expression "acute and chronic nephritis."

There is generally a definitely known etiological factor in acute nephritis, such as an acute infectious disease. If the patient survives, the inflammation of the kidney usually clears up in due time; but, on the other hand, if the primary infection persists and toxins are slowly eliminated, the nephritis becomes a chronic glomerulo-tubal nephritis. As long as the toxic material continues to circulate in the blood, so long the chronic inflammation will continue in the kidney. We may find in the end an enlarged kidney, a large white kidney, or one considerably reduced in size—a small white kidney. For this type of kidney disease, the most common and best known expression is "chronic parenchymatous nephritis." The term "chronic interstitial nephritis" has been in disrepute for a long time, because it is a mooted question whether the disease is primarily nephritic or arterial in origin. It would seem that it is brought about primarily by a gradual obliteration of the blood vessels of the kidney. It is interesting that these vascular changes produce anatomical and functional alterations in many cases not unlike those which arise from injuries inflammatory in character.

THE ARTERIO-SCLEROTIC KIDNEY

The gross appearance of the contracted kidney from chronic interstitial nephritis, or arterio-sclerotic kidney, may differ in no way from the contracted kidney in chronic glomerulo-tubal nephritis. It is said that the thickening of the walls of the blood vessels is distinctive in some cases, but we must realize that there are all gradations of arterio-sclerosis and indeed the two conditions may co-exist. It is believed by many writers that the arterio-sclerotic disease of the kidney is infectious in origin, just as is the chronic glomerulo-tubal nephritis. Besides a toxemia from infection, we must not overlook the

absorption of gastro-intestinal poisons from faulty metabolism, brought on by excessive mental strain, under-exercise, over-eating, abuse of alcohol, tobacco, et cetera. Especially may this be a factor in the production of the arterio-sclerotic form of kidney disease.

The arterio-sclerosis, whether metabolic or infectious in origin, may be general or patchy. If more pronounced in the brain, we have cerebral symptoms early; if the vessels of the heart, with normal or usually increased blood pressure, angina and myocarditis; if the kidney, hypertension and albuminuria; if a combination or general sclerosis of the vessels of the vital organs, we may have signs and symptoms pointing to angina, hypertension, with cardiac hypertrophy, and renal disease in the same case about the same time. The internist is sometimes unjustly criticised by the eye specialist because the eye grounds show signs of vascular disease after the internist makes a negative report as to the cardio-vascular renal system. In such cases the sclerosis is not diffuse and general, but localized primarily in the retinal vessels for the time being. The oculist should not condemn, but he should acquaint the internist with his suspicions and advise a most minute and thorough examination to determine, if possible, the origin of the systematic infection or toxemia that it may be treated and removed in its incipency. At the present time, the average physician, after he finds hypertension and albumin, tells the patient that he has Bright's disease; that he or she has only a few years to live, and that at best the mode of living makes but little difference. Instead of prognosticating, he should consider his case only partially diagnosed; he should seek the cause of the nephritis.

BLOOD CHEMISTRY

Medical journals of the last few years have contained several papers and references on the value of blood chemical analysis, in the diagnosis, prognosis and treatment of nephritis. Blood chemistry at the present time implies the estimation of the non-protein nitrogenous blood constituents, *namely*: uric acid, urea nitrogen, creatinin and sugar, as a routine; less often the total non-protein nitrogen, cholesterol, and the chlorides as NaCl.

*Read before the Medical Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

In impairment of kidney function, there is retention of one or more of these elements, varying in amount according to the degree of the lesion. The normal amounts of these ingredients in the blood of a healthy adult, after a proper purin-free diet, are as follows; uric acid 1 to 3.5 mgms. per 100 cc of blood; urea nitrogen 12 to 15 mgms; creatinin 1 to 2 mgms; sugar 0.08 to 0.12 per cent.

If the excretory function of the kidney is weakened or impaired, the uric acid content of the blood is first retained; if the kidney impairment increases, there is retention of the urea nitrogen; finally, as the kidney function becomes seriously disturbed, creatinin is stored or retained in the blood. Thus, uric acid is eliminated with the greatest difficulty, creatinin with the least and urea nitrogen in a comparative or intermediate degree.

INCREASED URIC ACID RETENTION

The usual ambulatory cases of hypertension may or may not show a slight increase in uric acid, with a normal urea nitrogen and creatinin. If there is a definite impairment of the renal function, uric acid accumulates in the blood. There is uric acid retention in lead poisoning, gout, bichlorid poisoning, malignancy, pneumonia and in most cases of leukemia; however, we have other measures of diagnosing these ailments. Myers and Fine say: "*The blood picture in early interstitial nephritis and gout are strikingly similar, particularly as regards the increase in uric acid. In view of the other clinical signs in common, it would seem that this similarity must be more than accidental.*" Increased uric acid retention, if nephritis can be excluded, may differentiate a gouty arthritis from a rheumatic arthritis. It has been stated that uric acid retention may precede albuminuria and casts. I can state that we have had in many cases with hypertension, a slight trace of albumin, hyaline casts and cylindroids, with no excess of blood uric acid. I do not believe that the retention of the urinary excretory products in the blood occurs in nephritis without albuminuria and casts. Uric acid retention only helps to confirm the physical, clinical and laboratory findings. Its increase has little diagnostic importance; nor is it of prognostic value, except in conjunction with other retained products. Since uric acid is an earlier retention product than either urea nitrogen or creatinin, the two latter are not of great diagnostic importance, but, on the other hand, are of superior prognostic value. In a well-defined interstitial nephritis, with definite physical signs and symptoms, the uric acids ranges from 4 to 15. Terminal fatal cases with uric acid above 20 have been recorded. When you have a retention of 12 mgms. or over, you will find that you are probably dealing with a patient with "uremic nephritis."

INCREASED RETENTION OF CREATININ

Creatinin, as before stated, is more readily eliminated than either uric acid or urea nitrogen;

hence retention of creatinin is indicative of a serious renal disease. Myers believes that 3.5 mgms. should be looked upon with grave concern in chronic interstitial nephritis; that over 5 mgms. points, almost surely, to an early fatal termination. Early fatal cases of nephritis have been reported with creatinin above 30. Creatinin as a prognostic indicator is only of value when high, in chronic parenchymatous nephritis. We may find not over 3 or 4 mgms. at any time in the fatal illness. As a rule all nitrogen retention products are lower in parenchymatous nephritis than in the interstitial form. In bichloride poisoning and in acute nephritis, the creatinin may run higher than in interstitial nephritis without a fatal issue. The prognostic importance of creatinin is limited; in a way, it only aids us in anticipating an early death, which may be forecast by other signs.

PROGNOSTIC VALUE OF BLOOD UREA RETENTION

The blood urea retention is of greater significance to the physician and especially to the surgeon, than either the uric acid or creatinin. The retention of uric acid alone is chiefly of diagnostic importance; creatinin has its place as a prognostic indicator in late nephritis; while blood urea, being an intermediate retention product, gives us definite information relative to the type of nephritis that is amenable to treatment. Thus urea nitrogen affords us an index or guide as to results of our treatment and it is also the safest indicator for surgical procedure.

From a surgical standpoint, it has been stated that the kidneys can be disregarded when the urea nitrogen is no greater than 20; that when it is from 20 to 30 the surgeon must work with great care and concern; that the case is unfavorable for operation when the blood urea nitrogen is above 30; that the outlook for the patient is exceedingly grave when the urea nitrogen retention is above 65. Myers reports a case of acute nephritis with urea nitrogen of 106 and recovery. Finally, in mild impairment of the kidneys, there is uric acid retention; if more advanced, we will find blood urea, besides the uric acid; if the renal condition becomes serious, there will be a rise in the creatinin, together with uric acid and urea nitrogen. In chronic parenchymatous nephritis the nitrogen is not so high. There is little if any retention in eclampsia.

TOTAL NON-PROTEIN NITROGEN DETERMINATION

No reference is made as to the significance and importance of increased total non-protein nitrogen in the blood. Mosenthal and Hiller state, "That the selective action of the kidney maintains the urea nitrogen at a level of 50 per cent. or less of the total non-protein nitrogen." The total non-protein nitrogen determination requires more time, is more technical, therefore is subject to greater error than the estimation of the blood urea. Its significance is very much the same. Urea nitrogen is more valuable because it is a

definite compound and its significance is generally known.

PHENOLSULPHONEPHTHALEIN TEST

Of all the chemical dye tests, Garaghty and Rowntree's is the best and most frequently used, because it is simple in application; it is harmless to the patient; the examination can be completed in a few minutes after the urine is obtained.

The usual hospital routine is an intramuscular injection of exactly 1 cc. of phenolsulphonephthalein. The bladder is emptied in ten minutes and again in two hours. Previous to the injection a glass of water should be given every hour until a free flow of urine is established and the drinking should be kept up until after the last urine is voided or obtained by catheter. Obstructive prostatic cases of course should always be catheterized. The drinking of water previous to the use of the dye will certainly do away with some variations in the amount of the dye excreted from day to day. The routine test should be made as simple as possible, for the physician's time is too limited to include the injection of the dye and the collecting of the urine. However, should the dye test show 25 per cent. or below, then the phthalein should be repeated, observing every precaution as to the drinking of the water and time of catheterization, if required. The second injection should be intravenous, every detail being carried out by the urologist; the urine collected in one hour; if still below 25 per cent., the blood should be drawn for blood urea estimation. If the urea nitrogen is within reasonable limits and the general physical condition of patient is favorable for operation, then it is safe to proceed, disregarding the low phthalien output. This latter statement is made with definite knowledge of successful operations performed under like conditions. The assertion is not made with any desire to belittle the value of the phthalein test. The dye test is the routine functional renal test employed by urologists on cases of prostatic hypertrophy. In this condition it is a test of necessity for a simple chemical and microscopical examination of a urine loaded with pus gives us very little, if any, definite information as to functional efficiency of the kidneys. It is sure to come into more general use as a prognostic indicator for operative procedure by the surgeon and by the physician as an index of his treatment of nephritis. Varied outputs in the same case and the low elimination with practically normal kidneys are probably due to faulty technique and care on the part of the patient, nurse or physician. The fact that the phthalein elimination is low, does not necessarily imply retention of nitrogenous waste products. In Folin's experiments of induced nephritis on rabbits, it was found that the phthalein output dropped more rapidly than the non-protein nitrogen and urea accumulated in the blood; that it reached its lowest level before the highest retention of the waste products; that the dye came back to the normal more rapidly. In

the main, the two tests ran parallel, but one should never rely on the dye test alone in questionable cases. *A negative or low dye test does not signify as much as a relatively high urea nitrogen, for it does not always follow that in a low dye output the kidneys are seriously impaired; while, if high, the kidney function may be considered safe for surgical procedure, if physical signs and symptoms warrant the same.* We should remember that the phthalein is destroyed in the tissues in the absence of sufficient oxygen and this destruction must be considered in every case of so-called phthalein retention. The factors which control the elimination of this dye are the proper aeration of the blood, sufficient oxygen carrying capacity of the blood and a sufficiently vigorous circulation (Kendall). Therefore patients with cardio-respiratory decompensation show phthalein retention which is not a true index of the functional capacity of the kidney. "The good excretion of test substances usually means a good function." Terminal hyperfunctional excretions of phthalein have been reported. The significance of repeated phthalein tests as an index of the progress of nephritis cannot be overestimated; but the dye test does not give you the information concerning the nitrogenous waste materials retained, so important in the treatment of chronic nephritis. The phthalein test affords us an index of the function of the kidneys for the moment; the blood chemical tests give us information as to the impaired renal function; a measure of the nitrogenous waste products accumulating in the blood and the amounts excreted by the kidneys.

AMBARD'S CONSTANT—MCLEAN'S INDEX

By a comparison of the concentration of urea in the blood and that excreted by the kidneys, Ambard has developed a formula, now designated as "Ambard's Constant," by which the capacity of kidneys to excrete urea can be determined. I have had no experience with this formula. Mosenthal claims that Ambard's Constant furnishes us with a means of determining very accurately the degree of renal function present; that the blood urea changes with dietetic regulations on the one hand and renal function on the other. Ambard's Constant remains fixed unless the disease changes and renal function either improves or deteriorates; whereas the blood urea and creatinin can be employed as indicators for dietetic therapy. Ambard's Constant has its greatest usefulness as an indicator of renal function. McLean's index is identical in principle, but he has developed a different method of calculation. Victor C. Myers says of Ambard's Constant, "Our own experience with this method has been disappointing, in that the results have failed to reveal any added information not given by the blood alone." Myers quotes Folin as follows: "The complicated mathematical formulas introduced in connection with the Ambard coefficient do not tend to increase one's confidence in that coefficient. It is difficult

to see how square roots and cube roots help to elucidate such a simple metabolism proposition."

THE EXAMINATION OF THE FUNCTIONAL CAPACITY OF THE KIDNEY BY THE RENAL TEST MEAL

The test meal for renal efficiency was first used by Hedinger and Schlayer in 1914. Since that time, H. O. Mosenthal, of New York, has written extensively on the value of the renal test meal. A diet is prescribed measuring the food and fluids taken in the twenty-four hour period. The urine is saved every two hours for twelve hours in the day, making six specimens; a separate container is used for the night urine; thus we have seven urines for observation. In a man with healthy kidneys, the gravity of the urines of the six specimens voided in the day time should show a variation of nine points or more. The less the variation, the greater the kidney impairment. The condition is spoken of as the failure of the kidneys to concentrate. The normal quantity of night urine is 400 cc or less, (it may run up to 600 cc). The specific gravity is 1018 or above. If the total quantity of night urine is more than 600 cc., if the specific gravity is under 1018, if the day urine shows lack of power of the kidneys to concentrate, it is fair to assume that the kidneys are impaired.

The diet prescribed contains definite amounts of fluid, salt and nitrogen. The excretion of the normal kidney, following the use of the renal test diet, has fairly well-defined limits. Thus the study of the degree of elimination of fluids, salts and nitrogen in a given case can be made, affording us an index of the functional capacity of the kidneys. Other test diets have been proposed to determine kidney function. The simplest is the giving to an individual at rest, on an empty stomach, a measured amount of water. The urine is collected hourly. It has been found that the urinary excretion in three to three and a half hours will equal the amount of water taken by mouth. The kidneys are most active during the first hour; the gravity of the urine is lowest in the first specimen. If a man is given a regular meal, plus 1000 cc. of liquid, at seven p. m., he will excrete normally by ten p. m., or three hours after his dinner, about two and a half times as much urine as from ten p. m., to eight a. m. The drinking of liquids by an individual with healthy kidneys is followed by an early diuresis. If early polyuria does not occur, we may surmise that the functional capacity of the kidneys is lowered. If the ten hour night urine is greater than the three hour period after the meal, we may suspect a nephritis with an embarrassed or overworked heart, whose burdens, lightened by the rest of body and mind, forces more blood through the kidneys, resulting in an increased urinary secretion. The deductions outlined as to the value of the renal test meal, would not obtain in chronic nephritis, complicated by cystitis, pyelitis, or prostatic hypertrophy. The same is true for certain functional

and organic diseases of the central nervous system, also diabetes mellitus and insipidus.

HYPERTENSION AND KIDNEY DISEASE

Apart from the blood chemistry in kidney disease, there is a disposition on the part of some physicians to classify hypertension with normal uric acid content or slightly increased, say up to four or five mgms., as essential hypertension. Albutt believes that hypertension is a disease in itself; he uses the term "hyperpiesis"; other expressions for this ailment are "essential hypertension," "primary hypertensive cardio-vascular disease." Most of these cases of essential hypertension, after a lapse of time, become true cases of chronic interstitial nephritis, with uric acid retention, albuminuria, et cetera. The term "hypertonia" and allied terms should be dropped. A vascular spasm, followed later by a sclerosis of the arterioles of the kidney, primarily leads to hypertension. Histologic sections will show minute fibrous changes in the kidney at this time. Why tell the patient that he has high blood pressure, but not a nephritis? Such an assertion probably arises from the fact that albumin and casts are not found, which can be explained by the chronicity of the disease. Complete obliteration of a glomerulus and tubule plays no part in the symptoms of nephritis, except in the reduction of the kidney as a whole. In the arterio-sclerotic kidney the destructive changes are slow; they may run over a period of twenty or thirty years. The healthy portion of the kidney undergoes hypertrophy of sufficient degree to compensate for those areas whose function has been gradually lost by arterial fibrosis.

The destruction and repair of the kidney are so nearly balanced that there may be very little evidence of disease, as far as the urine is concerned. *Far too many urines are left to the office girl or to a student for examination. They are not on watch for minute traces of albumin as a routine in the testing of several specimens a day. The ancient contact test of nitric acid is still used by many physicians. This is the least delicate of all tests and the technique in many instances is crudely performed. One of the simplest and best tests for albumin in urine is the heat, acetic acid and salt solution method, using two test tubes of about 5 cc. each of urine, one for boiling, the other for comparison. This test will reveal minute traces of albumin if the tubes are viewed over a dark background against a good light with seeing eyes. If albumin is looked for in this manner in our hypertension cases, very few of them will be told that they have high blood pressure, but no kidney trouble. If no albumin is found today, you will find it tomorrow, next day, or next week. I feel such confidence in the truth of this statement that I desire to lay special stress upon it. Always procure a p. m. urine for examination. Very few narrow hyaline casts and a greater number of true cylindroids will appear with the*

albumin. The albuminuria and cylinduria is present before there is uric acid retention.

If Baumann, Hausmann, Davis and Stevens would test the urines themselves in their early cases of chronic interstitial nephritis, the following conclusion of theirs probably would be modified: "That the uric acid concentration of the blood is a delicate, if not the most delicate, index of renal function at our disposal."

UREMIA AND ACIDOSIS

Uremia.—The cause of uremia is unknown. It is probably associated with the faulty elimination by the kidneys of some toxic poison. "Whatever the toxic materials are, whether nitrogenous or non-nitrogenous, it is well established that they produce their effect when nitrogenous waste material is retained in the blood."

Acidosis.—The reaction of the body fluids, according to Marriott and Howland, depends upon the excretion of the phosphates of a normal metabolism by the kidneys. It is the lack of elimination of acid phosphates and not an increased formation which leads to accumulation in the body fluids. Weakened permeability of the kidneys for acid phosphates is followed by a nephritic acidosis. The acidosis of nephritis may prove to be more serious to the patient than the nitrogenous retention. In diabetes the acidosis is produced by the faulty metabolism of the fats. In this condition a foreign acid is added to the blood, while in nephritis the acid of a normal metabolism is retained.

The normal blood sugar ranges from 0.08 to 0.12 per cent. When the blood sugar rises to 0.17 per cent. sugar appears in the urine of early cases of diabetes with fairly healthy kidneys. If the kidneys are seriously impaired by nephritis, their permeability for sugar excretion is lowered and the blood sugar may rise to 0.2 or 0.3 per cent. without sugar appearing in the urine. Thus we may have in such a case a diabetic and nephritic acidosis combined. The most reliable method of determining the degree of acidosis is by the Van Slyke apparatus for estimating the volume present of CO_2 combining power of blood plasma, which is normally about 65; (*i.e.*: the blood plasma will take up 65 vol. of CO_2 blown into it). In acidosis the combining power of the blood plasma drops to below 50.

A simple method for determining the CO_2 in the expired alveolar air, which can be applied at the bedside, has been described by Marriott. The apparatus is inexpensive, takes up but little more room than a hemoglobinometer. The determination can be made in a few minutes. It is not considered as exact an index of acidosis as the blood plasma CO_2 determination of Van Slyke. The normal alveolar air CO_2 by the Marriott method is 38 to 45, using Marriott's apparatus made by Hynson, Wescott and Dunning. If there is a degree of acidosis present, it will change these readings from the normal in proportion to its severity. The alveolar air CO_2 bears a definite relationship

to that of the blood plasma. The results of the Marriott method of estimating the degree of acidosis corresponds very closely to the Van Slyke determination on the blood plasma. "If the CO_2 tension lies between 38 and 32 mm. Hg., a slight acidosis is present; between 32 and 28, a moderate acidosis; and if it falls below 28, the acidosis is extreme."

DIAGNOSTIC VALUE OF ALBUMIN AND CASTS

The presence of albumin and casts in the urine is purely a diagnostic sign of kidney irritation. Even the history, physical signs and symptoms, except in certain cases, do not make proteinuria and cylinduria a prognostic indicator. The absence of casts and albumin, with a normal blood pressure, excludes a nephritis. In chronic interstitial nephritis with hypertention, there will likely be a slight trace, or a good amount, of albumin, or at times the albumin is absent. In true parenchymatous nephritis, the albuminuria may be high and still the patient is up and about, leading an active life, without signs or symptoms of nephritis. A distinct albuminuria is found in cardiac disease with decompensation, still the kidneys may be normal after the passive congestion is removed. There are other like conditions which cannot be touched on in this brief space.

The presence of, or the degree of, albuminuria cannot be considered an index of the true functional capacity of the kidney. The best prognostic indicator of the renal efficiency is the phthalein test often repeated, owing to its simplicity of application and its reliability. If the dye test shows a 25 per cent. output or below, the blood chemical tests for nitrogen retention should be made. The inferences derived from the blood chemical analyses have already been stated.

The Mosenthal renal test diet can hardly be recommended as a routine procedure, since too much time is required on the part of the physician and from the patient's family. The accurate performance of the test, even in the hospital, has its difficulties.

370 EAST TOWN ST.

Benzyl Benzoate—Van Dyk.—A brand of benzyl benzoate (See New and Nonofficial Remedies, 1920, p. 49), complying with the N. N. R. standards. L. A. Van Dyk, New York, N. Y.

Benzyl Benzoate—Van Dyk 20 per cent. Aromatic.—Each 100 cc. contains benzyl benzoate—Van Dyk, 20 cc.; oil of orange, 0.74 cc., and alcohol, 79.26 cc.

Vargol.—A compound of silver and a derived albumin containing not less than 20 per cent. of silver. For the action and uses of Vargol, see general article on Silver Preparations under Silver Protein Preparations, Argyrol Type, New and Nonofficial Remedies 1920, p. 310). Heyden Chemical Co., New York, N. Y. (Jour. A. M. A., Nov. 27, 1920, p. 1499).

Fallacy of Depending On a Single Test for Kidney Function*

Simon Englander, M. D., Cleveland

Editor's Note.—Dr. Englander considers that renal function is always treacherous and always the concern of the operator, particularly so when the kidney or inter-related organs become the object of surgical attack. In an investigation of statistics by B. A. Thomas the mortality for major operations in the genito-urinary tract was found to be seven times as great in the hands of the general surgeon as in those of the urologist. Hence Dr. Englander warns the general surgeon that if he would avoid his rather formidable list of fatalities after operation in the genito-urinary tract he must very carefully study the functional efficiency of the kidneys, as attention to this vital consideration often accounts for the difference in the death rate of operations performed by the general surgeon and the urologist. According to Dr. Englander the general surgeon is still submerged in a lot of hide-bound technicalities, armoring himself against certain dangerous operative difficulties or concerning himself with the prevention of post-operative complications, while altogether neglecting the most essential points—the knowledge of renal efficiency.

CASE REPORT—Mrs. H., referred by Dr. W. G. Mussun, October 28; well nourished.

For several years she has been complaining of colic-like pains in the right lumbar region, which occurred periodically every two or three months, and were usually of a week's duration. These attacks were accompanied by frequent spells of weakness, chills and cold sweats.

Microscopical Examination.—Puss cells and few red blood cells.

Phthalein Test.—Right kidney, three minutes. Left kidney very slight trace in fifteen minutes, and very little urinary excretion. Owing to the fact that symptoms were in the right side, but examination pointed to pathological condition in the left, the test was repeated with the same results.

Pyclography.—Dilated left kidney pelvis with indefinite shadow at the lower angle.

Operation.—Right nephrectomy which revealed a dilated pelvis lined with calcareous deposit.

Post-Operative History.—Good recovery and convalescence in hospital. Two months later, after a considerable mental and physical strain, severe, almost constant, pain in right lumbar region, accompanied by vomiting, dizziness and headache.

CASE 2—Mrs. suffered from periodic anuria with colicky pains on the left side, but was otherwise, apparently in the best of health, and well nourished.

Cystoscopic Examination revealed a left kidney, which secreted phthalein very slowly, and in very small quantities.

Pyclography.—A dilated pelvis with the uretero-pelvic junction elevated in relation to the pelvis of the kidney.

It was thought that periodic twisting of the kidney on the ureter was responsible for the anuria and nephrectomy was recommended and carried out.

Post-Operative History.—When last heard of, about one year ago, the patient was still suffering from these anuric attacks.

DISCUSSION

These very briefly cited cases have very forcibly sort of made me "sit up and take notice," and it is at the request of the secretary of this Section that I present this paper.

The renal function is always treacherous, and always the concern of the surgeon, particularly so when the kidney or inter-related organs become the object of surgical attack.

While I do not presume anything very new, the paper is intended as a sort of resumé, a recapitulation, and perhaps more as a warning to the general surgeon who is wont more often, than not, to attempt operative interference in the urinary tract, without thorough preliminary functional renal examination and then very often to wonder at the wherefore of his rather formidable list of fatalities after operation in the genito-urinary tract. It behooves one therefore, to study very carefully the functional efficiency of the kidneys. This alone often marks the great difference between the skilled urologist and the general surgeon, and accounts for the relative difference in the operative death rate between the two. The general surgeon, to a great extent, even today, is submerged in a lot of hide-bound technicalities, armoring himself against certain of the most dangerous technical steps of various operations or concerns himself with the prevention of operative complications, neglecting altogether one of the most essential points, the knowledge of renal efficiency. In an investigation of the statistics of the hospital made by B. A. Thomas, the mortality for major operations in the genito-urinary tract was seven times as great by the general surgeon as the urologist.

From early in the nineteenth century to the present day, there have been test after test, too numerous to mention; those of elimination, which caused an odor in the urine after ingestion of the same, to the elimination of chemicals such as potassium iodine, salicylic acid, methylene blue, the intra-muscular injections of dyes; rosanilin, indigo carmine, until the present day, the intravenous injection of phenolsulphonephthalein, indigo carmine, et cetera. In the schools of Berlin

*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

and Vienna, the test of the retention products, have been more popular than they have here.

The excretion of urea in the urine, the urea retention, the blood total nitrogen, cryoscopy of the blood and urine, the acidosis and the chemical examination (quantitative) of various other excretory products of the kidneys, have all been used as diagnostic and prognostic tests.

As a result, quite a controversy has arisen, not only in our own country, but in every corner of the world, each one naturally drawing conclusions which to him of course, made his test *par excellence*, regardless of what might have been accomplished by someone, somewhere else, never for a moment giving the work of the others any consideration.

Through the untiring efforts of B. A. Thomas and of Rowntree and Geraghty, sentiment has finally crystallized itself, and the indigo carmine and phthalein test have been almost universally adopted as tests of elimination, combined by some workers, with the urea content of the blood as a test of urinary retention.

DIFFICULT AND UNSATISFACTORY TESTS

Briefly we will mention a few of the formerly popular tests, but which have now been cast in the discard owing, in some cases, to the very intricate complicated methods necessary to perform them, and a very large array of costly and delicate instruments.

Blood Cryoscopy.—Even Koranyi, the originator of the test, warns against the placing of too much confidence in the value of the test in estimating kidney function, and furthermore, the apparatus is so complicated and delicate, that the test is impractical.

As for cryoscopy of the urine, the elimination of certain solids wholly unrelated to the test or the ingestion of large quantities of water may so influence the result of the test that it is worse than useless.

The Polyuria Test requires ureteral catheters to remain *in situ* for two or three hours, sometimes causing reflex inhibition. The test is not sensitive enough to differentiate small differences in kidney function.

The Phloridizin Test has proved impractical, as sometimes even in normal kidneys it produces no glycosuria; in other cases it is too sensitive, and therefore absolutely undependable.

Blood and Urine Urea Test.—Scherk and Gradwohl are convinced that no urological case is completely examined or ready for operation without the most important of all retention tests, that of blood urea. In the Rytina Clinic, the border line of safety was considered as passed when the blood urea reached 0.75+ grains urea per liter, and according to several successive tests, whether the amount was constant or decreased or increased prognosis of the case was easily determined. While used in conjunction with the phthalein test, the urea retention test was looked upon at this clinic with a great deal more favor, and conclu-

sions drawn accordingly. Of course in renal surgery, a blood urea test was not considered sufficient, and was combined with the phthalein test for individual kidney function.

On the other hand, at this same clinic, they claim to have had a considerable number of cases in which the phthalein excretion was normal, but the concentration of blood urea was high, and in almost every instance, operation was followed by death.

In certain cases, excretory tests are unreliable, and here even the most ardent advocate of phthalein, indigo carmine, and such tests, must admit the superiority of the retention test; in urinary suppression, urinary lithiasis with total obstruction; in extensive median lobe hypertrophy when there is residual urine, and a large sac lies back of the projecting prostate; in diverticula of the bladder when all the urine can not be obtained; also in any form of vesical fistula, when some of the urine and consequently some of the dye, is lost through the fistulous opening. It is also conceivable that in some forms of hydronephrosis, the sacculations may be such that a certain amount of urine is retained in the pelvis of the kidney, and of course with it some of the dye. Impassable stricture of the urethra or contractures at the vesical neck do not allow of the complete emptying of the bladder by mechanical or natural means.

In tabes, pyelonephritis or other conditions, due to obstruction at neck of the bladder and causing laxity or relaxation of the ureteral opening, or in tabes, the dye may escape along side the ureteral catheter, making the urea test absolutely indispensable in such cases.

It is possible for a kidney to have very markedly decreased excretion, *i.e.*, low phthalein or indigo carmine output, yet at the same time be able to excrete the urinary constituents in normal amounts.

Test of Excretion.—In a limited way, the kidneys can be particularly well studied, because of the ease with which their excretion may be obtained. Clinical examination combined with microscopical study of urine, often gives us a very scant knowledge of kidney involvement, or else may lead us very much astray when the pathological process is very much advanced. Pathological elements may be present in great abundance, yet the condition may not be very grave, as evidenced by the fact that the patient recovers completely, or on the other hand, there may be little or no pathological involvement and yet a very grave condition may be present.

THE IDEAL FUNCTIONAL TEST

It is the function of the kidney to separate the substances carried to it by the blood, and to eliminate these in the urine.

Though the work of the healthy kidney may vary for a short time, when the experiment is carried on for a matter of ten or twelve hours, the amount of work done by each kidney is practic-

ally the same. In disease the functionally viable kidney takes up the burden of its pathologic mate, making up for the lack of elimination due to diseased kidney tissue, and making the elimination of urinary products practically normal, or at least very closely approaching the same. Upon this very elastic adaptability of the kidney, the tests of elimination are based, and always prophesy disaster or the future well-being of the patient long before the same may be recognized by the microscopic examination of the sediment. Autopsy proves that phthalein output corresponds to the amount of kidney destruction.

The function of the kidney in separating the various substances from the blood, is not a process of filtration and osmosis, but is due to the selective action of the cells of the convoluted tubules, and perhaps also of the glomeruli.

The ideal functional test therefore, is one that will indicate constant variations in function where there are constant abnormal conditions present, and should also indicate proportionately, the amount of the damage in the organ or organs. It should also be very simple of application, and mathematically correct and easily computable and easy of interpretation.

Able to withstand the criticisms of the advocates of other tests and possessing all the properties that the ideal functional test should have phthalein and indigo carmine remain the most popular and most generally adopted excreting tests of renal function.

It is not my intention to bore you with a rehash of a lot of literature on these two tests, which have been gone over and over again, but I wish to say just a few words about their comparative advantages and disadvantages. Let it not be forgotten that these two tests may be made at the same time on the same patient, for indigo carmine is soluble in alkaline solutions, while alkalies intensify the color of phthalein. Phthalein is excreted practically entirely by the kidneys, while according to Rowntree and Geraghty only 25 per cent. of indigo carmine is excreted by the kidneys. Not only can we recognize the changed member, but with a fair degree of accuracy estimate the amount of kidney tissue which is pathological, and very often predict urinary disaster when the patient seems to be in best of health. Most certainly, the patient's physical condition must be taken into account and weighed with the findings of the functional examination. However, where there is a constant low urinary excretion, operation in selected cases may be undertaken, especially when percentage quantity varies, but slightly under the influence of change of diet, excessive mental or physical excitement.

B. A. Thomas believes that the index of urinary excretion is of prime importance in considering operation in the genito-urinary tract, and should be about 5.1, and particularly in those kidneys presenting a low but constant excretion. A great deal of consideration should be given it where other conditions are favorable. A functionally

diseased kidney elimination is prone to begin very slowly and excretion may increase with the lapse of time, so that the index of elimination may often be reversed.

SHORTCOMINGS OF THE PHTHALEIN TEST

Before closing, I wish to enumerate a few shortcomings of the phthalein test, but which can usually be guarded against with just a little care.

Reflex anuria due to presence of the catheter.

Leakage around the catheter.

Stoppage of catheter by mucus, pus or blood, Occasional impossibility of finding ureteral opening in trabeculated bladder or ulcerative condition of bladder.

Possibility of carrying infection upwards.

CONCLUSION

1. Kidney functional tests are absolutely indispensable in urologic surgery.

2. Reliance on tests of retention or of excretion alone may result disastrously, and should always be combined.

3. The urea test of retention and phthalein and indigo carmine for test of excretion are the simplest and most reliable.

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630 OSBORN BLDG.

Chlorlyptus Not Accepted for N. N. R.—Chlorlyptus (Weeks Chemical Co.) is a chlorinated eucalyptus oil containing 30 per cent of chlorine in relatively stable combination. It is claimed to be a new "chlorinated antiseptic," highly efficient as a wound antiseptic. It is proposed for use in local infections, burns and as an antiseptic in the alimentary and urinary tract. The laboratory investigation made in the A. M. A. Chemical Laboratory and by the referee of the Council on Pharmacy and Chemistry who was in charge of the product showed that Chlorlyptus is a feeble antiseptic, considerably weaker than eucalyptus oil. The chlorin contained in it is bound too firmly to have any action; in fact, the chlorination has merely weakened the eucalyptus oil. The clinical evidence submitted by the manufacturer did not demonstrate the value of Chlorlyptus. The Council on Pharmacy and Chemistry voted not to accept Chlorlyptus for New and Non-official Remedies, because of the unfavorable results of the laboratory investigations, but with the agreement that the product will receive further consideration if more convincing clinical data become available. (Jour. A. M. A., Nov. 27, 1920, p. 1512).

Ten Minutes with the Urine*

J. Henry Dowd, M. D., Buffalo, N. Y.

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Editor's Note.—The importance of routine examination of the urine is too well known to require emphasis. A careful urinalysis supplies the practitioner with the best means of determining if the kidneys are healthy and functioning properly. Dr. Dowd, in his practical and instructive paper shows the valuable information derived from a urinalysis in connection with renal function and nerve cell metabolism. The ten minutes with the urine advocated by the author call for very little apparatus and that inexpensive. The tests suggested are simple to use but far reaching as to the information their results develop.

A PROMINENT authority has stated that 80 per cent. of the results we get in the treatment of patients is due to the confidence they have in us. If this is so, and from the experience that most of us have had when trying to do anything for our relatives, or near friends, but one conclusion can be arrived at: In dealing with sick humanity we must in every way try to create in them confidence; give them the very best that we possess.

Disease, that is, disease symptomatically, is just the same today as it was in the days of Hippocrates. The only question is the interpretation of the symptoms and a correct application of remedial agents. Where this is done, results are sure to follow.

Of course, it would be folly to think that any one individual could master to perfection the correct grouping of the symptoms of over 3,000 different diseases to which human flesh is heir, but we can give them our best guess, as the late Justice Field, of the United States Supreme Court, once termed a diagnosis during the discussion of a medical case before that body: "Gentlemen, a medical diagnosis, even by the most expert, is little more than a good guess."

We are reading a great deal these days of group medicine or diagnosis, the same being the submission of cases to men specially skilled in the different lines of practice. These are efforts along correct lines, and are available at medical centers, but in the rural districts and among those not financially able to avail themselves of such, the general practitioner must still continue to be the universal specialist.

One other thought must be given consideration. Expensive apparatus is at times necessary, also technique which may not be available to all. The procedure the writer would advocate calls for very little apparatus, and that inexpensive. It is simple to use, but far reaching as to information derived.

URINALYSIS OF DIAGNOSTIC IMPORTANCE

The urine is the most important secretion and excretion of the human body, and there is no doubt but that this fluid furnishes more information as to the working of that body than any other secretion or excretion.

The fact must not be lost sight of, the urine not only shows conditions of the urinary tract, but

gives the most valuable information as to conditions in practically every other organ.

The following conditions can be easily and quickly determined: Any inflammatory action along the urinary tract from the meatus to the suprarenal capsule; urethritis, anterior and posterior; prostatitis; pyelitis and Bright's disease; diabetes, anemia, stone, tumor, mal-assimilation, intestinal putrefaction, pregnancy from the third week to the third month, but far greater than all to the general practitioner, conditions of the nervous system.

What are known as functional conditions, in other words, conditions in which there is no underlying anatomical change to account for the symptoms present, indeed, those conditions which constitute fully 80 per cent. of the ailments today, conditions in which well applied medication is not followed by desired results, all these can be quickly cleared away by ascertaining the true condition of the neurones of the brain.

For all ordinary examinations of the urine the following will suffice: Urinometer (phosphatometer can be used), ureameter (Doremus), albuminometer (Fry), phosphatometer (Dowd), test tubes, alcohol lamp, litmus and filter paper, nitric and hydrochloric acid C. P., together with Haine's or Fehling solution for sugar.

URINE CLEAR NORMALLY

Freshly passed urine should be clear, of an amber color, acid in reaction, practically odorless and of 1018 to 1020. Three pints is the normal secretion for twenty-four hours.

Any opacity is due to the following causes: Bacteriuria, pus, amorphous phosphates, mucus, spermatozoa, blood, urates, epithelium and, at times, crystals of uric or oxalic acid phosphates (coffin-lid crystals).

The following substances may appear after using certain chemical reagents: Albumin, sugar, urea, excess of uric acid, uroresin, indican, and the alkaline phosphates; (these must not be confounded with the earthy or coffin-lid crystals found in freshly passed urine). Of course, many other substances are found in the urine from chemical tests, but they are of little or no value in diagnosis.

For a positive differentiation of substances found in freshly passed urine the microscope is indispensable, but with a little experience many

*Courtesy of The Medical Council.

of these can be differentiated with a fair amount of success.

If urine is passed in two glasses, and both are of the same opaque density, it may be safely assumed that it is to bacteriuria, mucus, phosphaturia, urates, spermatozoa, blood or pus.

In all the above conditions, excepting bacteriuria, the urine on standing will become practically clear by the precipitate falling to or near the bottom of the receptacle; with bacteriuria the fluid becomes more opaque on standing.

The urine will be acid in all conditions except phosphaturia, which will be alkaline, and of a greenish hue.

Any urine becoming densely opaque on cooling, cider-like in appearance, is due to urates. It is always markedly acid in reaction.

Freshly passed urine in women is more or less opaque in a goodly number of cases. It is due to epithelial desquamation from the endometrium or vulva and is washed away as the urine passes. Bacteriuria is a most common condition in women; the epithelium will sink to the bottom of the glass, but the bacteria will not.

TWO-GLASS TEST

With no discharge at the meatus (male), urine passed in two glasses of a similar density, and due to pus, has its origination behind the external sphincter muscle; it may be a posterior-urethritis, cystitis, ureteritis, pyelitis or from the secreting substances of the kidneys. Shreds appearing in the first glass show a positive involvement of the anterior urethra. This portion of the canal has been inflamed (gonorrheal or otherwise), and the inflammation is becoming localized. The appearance of well developed shreds in the first portion of urine passed, which is fairly clear, is a most positive indication of stricture, especially so if a previous history of gonorrhea is obtainable dating some years back. Small comma-like particles in the urine, and particularly so in the second glass, indicate prostatic involvement, generally follicular; they are washed from the mouths of the prostatic sinuses as the urine passes. The second urine being more dense than the first, and especially if a drop or more of free pus is observed at the termination of the act, indicates marked prostatic or seminal involvement; as the bladder closes to thoroughly empty itself the pus is squeezed out of these parts.

Pus having its origin in the pelvis of the kidneys is quite distinctive of pyelitis. Due to the colloid substance which that part of the mucous membrane secretes, a sort of a cohesion takes place to an extent that after standing for a time the pus forms in a mass markedly gelatinous in character; in this condition the pelvic epithelium is generally found in shingle-like formation; albumin is always present.

PHYSICAL CHARACTERISTICS OF URINE

Although three pints may be the normal secretion of urine for twenty-four hours, this varies

greatly even in perfect health, and in no way can be considered a positive evidence of any specific condition. Where urine may be markedly increased in amount, it is due to one of two causes; diabetes or relaxation of the inhibitory nerve mechanism of the kidneys, due to some nerve condition, generally functional. This is a very common condition in women. A marked increase of urine of a watery color is almost pathognomonic of hysteria.

In the absence of diabetes as a cause, providing the nerve cell reserve (to be referred to later) is fairly normal, the best results will be obtained in treating these conditions with sedatives, preferably the bromides and valerian. Should the nerve cell reserve be low, but little or no result will be obtained until the deficiency is supplied.

Where the urine is diminished in quantity, highly colored, high specific gravity and markedly acid, especially if albumin is present, no remedy will give the happy result as will Basham's mixture in increasing the quantity and diminishing the albumin, if not entirely eliminating it.

Only soluble substances increase or decrease the specific gravity; pus and debris visible to the naked eye do not affect it. No conclusions can be drawn from the specific gravity. The writer has observed 1035 or even higher without sugar, yet has found sugar at 1024. In the absence of sugar, a high specific gravity is generally due to either an excess of uric acid or the alkaline phosphates; accompanying either of these conditions will be the condition known as acidosis.

Normal urine is acid, due to acid sodium phosphate. Eliminating an excess of uric acid, acid urates, etc., any marked change in reaction, an increased acidity or alkalinity, is due to an increase or decrease of acid sodium phosphate in the system. The continued alkalinity of urine free of amorphous phosphates (phosphaturia), and especially if there is any marked increase of indican, with a low phosphatic index, must not be looked on lightly. These patients are morose, nervous, and unless relieved very quickly are liable to drift into melancholia.

Alkalinity is best dealt with by ascertaining the amount of alkaline phosphates being eliminated. If low, supply the want by artificially feeding the impoverished neurones until such a time as the system will take its normal supply from the food we eat.

Blood, if present to any extent, gives to the urine a characteristic red color not easily mistaken. It must, however, be differentiated from hemoglobinuria, urates or bile; the microscope will quickly clear the case. Except where blood may be washed into the urine during menstruation, its presence in the urine indicates some pathological condition present; it is always found in cases of stone in the bladder or kidneys. Blood appearing in the urine without any apparent cause is most suspicious of tuberculosis, cancer or tumor of the bladder.

Spermatozoa passed in the urine, known as

spermatozorrhea, gives the fluid a slightly greenish hue much resembling phosphaturia. It is due to an irritation in, and including, the sphincter muscles of the ejaculatory ducts, in which they lose tonicity to an extent that escape takes place constantly. This condition is very easily remedied. Ascertain the phosphatic index; in practically every case it will be found very low; an alkaline, or faintly acid urine, in which a trace of albumin is generally present, usually accompanies it; prescribe nerve-cell nutrition.

The phosphates appear in the urine as earthy and alkaline. The former are visible to the naked eye in freshly passed urine (phosphaturia) or appear on boiling, the urine again clearing on the addition of an acid; these phosphates are the calcium and magnesium variety. The amorphous phosphates are found in connection with diseases of the bones, as a result of tissue metabolism and following a meal rich in vegetables. This variety of phosphates must not be confounded with the alkaline, only visible on precipitation, and which show nerve metabolism.

Crystals in freshly passed urine are very indicative of systemic mal-assimilation, although with the symptoms of stone present, in either the bladder or kidneys, if mal-assimilation can be eliminated, and blood cells are found, they, the crystals, point strongly to stone, and the variety. In the absence of stone, crystaluria is best combated by relieving the mal-assimilation. If there is a low index, feed the impoverished nerve cells; if indican is in excess, help digestion artificially. (My favorite is caroid).

ALBUMINURIA

Albumin is a coagulation of blood serum, and when escaping anywhere along the urinary tract will give rise to the reaction.

It is the general belief by many that albumin is only found in Bright's disease. The truth is, we find Bright's disease without albumin almost as frequently as we do with it. Albumin is found in the urine under the following conditions: (a) In inflammation anywhere along the urinary tract; (b) alterations in the character of the blood, where the serum is rendered more diffusible; it is as characteristic of anemia as is the test for hemoglobin; (c) changes in the kidney structure, there being a weakness due to degeneration; an example of this is Bright's disease; (d) changes in blood pressure due to diseases of the heart, in which there is a venous congestion. A quick and accurate test is made with the Fry albuminometer. The urine is placed in a conical tube, the funnel inserted and filled with nitric acid, c.p. The acid forces the urine upwards; the albumin, if present, will appear as a white ring at the junction of the acid and urine. The acid placed in a test tube and the urine allowed to trickle down the sides will answer the same purpose (Heller's test). Stimulating diuretics, co-paiba, cubebs and santal-wood oil will give a reaction simulating albumin; eliminating the use

of these before deciding as to the presence of albumin.

Where the urine is decreased in quantity, of a high specific gravity and albumin is present, whether the condition be due to Bright's disease or anemia, the best results will be obtained from the administration of Basham's mixture, two teaspoonsful in water after meals. Albuminuria due to inflammation, as during urethritis, prostatitis, etc., will disappear as soon as a normal condition of the mucous membrane ensues. In albuminuria due to venous engorgement, the heart must receive the proper attention, but accompanying heart conditions, if anemia is present, iron must be used. One of the most common causes of albuminuria is anemia. The successful treatment of this condition depends entirely on the condition of the nervous system. It must be remembered that iron for the blood cells is taken from the food we eat, and that digestion and assimilation is entirely controlled by the nervous system. Differentiation is quickly made. If there is a low phosphatic index, nerve-cell nutrition is called for; if index is normal, or practically so, iron—Basham's mixture—is the remedy of choice.

In testing for albumin, at times a whitish zone will appear in the free urine, this is due to an excess of uric acid. The reddish ring that forms at the junction of the acid and urine is urooesin, it is generally accompanied by a marked increase in indican and is an indication of increased fermentative changes in the intestinal tract, plus congestion of the liver. In the great number of these cases constipation is generally present; resin podophyllin acts most favorably in this condition.

INDICANURIA

Indican is present in all urines. It is due to the presence of micro-organisms in the intestinal tract. When it is markedly increased, intestinal fermentation is relatively increased. A simple but fairly accurate test is: Place two or three drachms of acid hydrochloric, c.p., in a conical glass, to which add 30 drops of urine, then 7 or 8 of nitric acid, c.p., if indican is in excess the color may vary from purple to an almost black. Where an index may be practically normal, the best results are obtained from sodium salicylate in connection with caroid. If a low index is found, but very little result will be forthcoming until nerve energy is increased by the addition of nerve-cell nutrition.

GLYCOSURIA

Glucose occurs in the urine under two conditions: functional and organic, or diabetes mellitus.

The former is due to alimentary or digestive disturbances, and can be entirely eradicated; the latter is due to disease of the pancreas, liver or suprarenal capsule, is always permanent, but life may be prolonged for some time if care is used in diet, with a little medication.

The diet should not be rigidly continued for

too long a time; acetone would soon appear, later diacetic acid and lastly oxybutyric acid, the cause of coma. It is better to let patients live ten years with a little sugar than a few weeks or months without it. The writer's best results have been obtained from a rigid diet for a week, increased thereafter by the addition of a baked potato daily and a slice or two of toasted bread. Most happy results have been obtained from the bromide of gold and arsenic solution, 10 drops three times a day, increased to 20, 25 or even 30, in water. The functional conditions will yield quickly to treatment; the organic cases will have life prolonged for years.

UREA

Urea is the most important nitrogenous element eliminated by the kidneys, 30 to 40 gms. in twenty-four hours. In estimating the output of urea, other nitrogenous elements (uric, hippuric acid, etc.) must be given consideration. Urea may be low and its deficiency made up by the latter elements. Where urea is low, as in Bright's disease, with restricted diet, sodium nitrite in half-grain doses gives marked benefit. In the case of coma, if arterial tension is high, no drug will act so quickly as nitroglycerine hypodermically, 1-100 grain.

PHOSPHATIC INDEX

An estimation of the alkaline phosphates, commonly known as the phosphatic index, shows nervous metabolism. It even goes further than this; it shows whether the nerve-cell reserve nutrition is low, and how the neurones are acting; that is, whether degenerative changes may not be taking place. It should not be forgotten that every thought, word, deed or action originate in the brain. The brain cells control and operate every function of the human being, asleep, awake, sick or well. Resisting power in all tissues is furnished through the nervous system; a low state of resisting power means a low state of the nerve-cell nutrition. Pain has its origin in the brain. Nerves cannot speak; their word for hunger is pain.

In conditions where recovery is slow, or with the use of appropriate remedies, results do not follow, the phosphatic index will quickly show the true cause. Where the index may remain high for any length of time, the reserve becomes depleted; the individual is apprised of the same by a group of symptoms rather hard to classify; neurasthenia may be present or develop.

Taking the phosphatic index is a very simple matter, using the second urine passed in the morning. Fill the phosphatometer to U, add solution (ammonia, magnesium sulphate—this accompanies the instrument) to S. Shake thoroughly and set aside for ten minutes. If the nervous system is functioning normally, or practically so, and the reserve is not depleted, the sediment will sink to N. P. in ten minutes, forming a practically solid mass. Such a finding indicates that the nervous system is no way a factor in any condi-

tion under treatment, no matter what this may be. Where the precipitate does not fall, is light and fluffy, or falls below N. P., nerve-cell nutrition is low, and, no matter what may be the disease under consideration, little or no result will be forthcoming until this deficiency is supplied. Give phosphorus, lecithin and nuclein.

In cases where the precipitate remains in a practically solid mass above N. P., irritability or hypersensibility of the neurones is evident. Sedatives are called for, the bromides and valerian if the case is acute, the bromide of gold and arsenic if chronic. In high blood pressure the index is practically always high; here the bromide of gold and arsenic will do more than any other drug. In retarded resolution, flesh or borne; in all cases of pain, especially neuritis, neuralgia and those supposed to be rheumatism; in all conditions where there may be a constant tired feeling, headache, backache, insomnia, cold extremities and like symptoms (neurasthenia), the phosphatic index will be found of the greatest value to ascertain the cause.

URINARY CASTS AND CRYSTALS

Casts are formed from proteid material excreted by the epithelial cells of the uriniferous tubules. Of clinical importance we have two varieties of casts—true and false. The false casts are found in the urine as a result of deficient oxidation of protein; that is, more protein is present than can be normally oxidized. Casts representing this condition are usually hyaline, but occasionally a granular or epithelial cast may be found. They do not show disease, simply a functional condition. Change in diet, avoiding red meat and highly seasoned dishes for a time, will remedy the condition.

Casts indicating Bright's disease are accompanied by the markedly granular, epithelial or waxy variety. The epithelium will show degenerative changes. When the urine is scanty in Bright's, no remedy will surpass Basham's mixture. The diet is all-important; shell fish (lobster, crabs, etc.), rhubarb, asparagus, tomatoes and highly seasoned food should be entirely eliminated; red meat should be used only in moderation.

The alkaline crystals which are never found in the urine, except after precipitation with the alkaline solution, gives most valuable information; use a one-half inch objective.

For all practical purposes they can be viewed under five forms, viz., (a) normal; (b) showing a want of nerve-cell nutrition; (c) pregnancy; (d) degenerative changes in the nerve cells or neurones; (e) hypersensibility of the neurones, as is found in acute conditions, hysteria and the like.

When normal the crystals resemble a fern leaf, the fronds are uniform and well developed; the crystals sink rapidly to the bottom of the phosphatometer when precipitated.

(b) These crystals sink very slowly in the phosphatometer; they appear light in weight, with edges serrated.

(c) In pregnancy, from the third week of uterogestation to the third month, the great majority of the crystals will appear as though stripped of their feathery edges; nothing appears but a sort of a stem.

CASE 1.—Mrs. F. No menses for two months. Two physicians had pronounced her pregnant. In consultation, urine showed slight trace of albumin; no casts or other evidences of disease; phosphatic index 80 per cent. minus with crystals (b); none were stripped of their feathery sides. A prescription of phosphorus, nux and can. ind. brought a slight menstrual discharge on the seventh or eighth day; next period was normal.

(d) In the amorphous variety there may be a semblance to the four or five pronged shape, but the sides are perfectly straight, not the least sign of fronds, and as the case progresses a stretch of imagination is necessary to find any shape resembling the normal.

CASE 2.—Miss M. Sick several months, neurasthenia being the prevailing diagnosis. In con-

sultation, pronounced neurasthenia was evident, accompanied by a hypochondriasis bordering on melancholy. The index was 90 per cent. minus, crystals amorphous, or fast becoming so; there was an alkaline reaction of the urine. A phosphorus mixture in connection with fl. ex. valerian and res. podoph. was ordered to be taken three times a day. There was marked improvement inside of ten days; in nine or ten weeks she was perfectly well, and has remained so. The delusions in this case at my first visit were of ample magnitude to have committed her to an institution, had she not been able to have had the best of care.

(e) Crystals normal in shape, but very small; they show the rapidity with which the neurones are acting. Crystals of this variety, accompanied by a plus index, is a most positive indication of high blood pressure. When this is found the most marked and gratifying results will follow the administration of bromide of gold and arsenic. It is unnecessary to undermine the physical condition by a restriction of diet.

9 NORTH PEARL ST.

Some Observations on Polycystic Kidney*

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Editor's Note.—Undoubtedly, according to Dr. Herrick, some cases of polycystic kidney give such a prominent family history of an hereditary tendency as almost to justify the term congenital as applied to the condition occurring in adults. From personal experiments, Dr. Herrick is convinced that the cystic pressure limits the renal circulation and that aspiration, under local anesthesia, as a therapeutic measure during acute retention, would seem to be justified, from time to time, as indicated. In patients able to withstand operation a more permanent form of cyst-drainage should be used. With our modern methods polycystic kidney should be diagnosed more frequently. The condition is characterized by a large irregular, nobby body in the flank, slightly or not at all tender, which moves with respiration. The condition is bilateral, although one kidney may remain smaller and only potentially cystic. Attacks of dizziness or fainting associated with persistent dyspepsia, without sufficient cause in otherwise healthy adults are suspicious. The urine is clear, of low specific gravity, with a small amount or no albumin and few or no morphological elements. There is very low phthalein output incompatible with the urinary volume. This with the renal enlargement mentioned is almost diagnostic. There is occasional, though not persistent hematuria as well as increased blood pressure, cardiac hypertrophy and accentuated aortic closure.

THESE has been, from time to time, some doubt cast upon the fitness of the term *congenital* polycystic kidney, as applied to the condition occurring in adults. Cases in which the well developed cysts are present at birth and cause the intra-uterine or rapidly post-natal death of the child are, of course, congenital. A limited number of such have been reported. A much larger number of cases, occurring in adults, are on record. The period between infancy and young adults, below twenty years of age, shows but thirty-two cases reported in literature. (Sieber). This is the period of acute infectious diseases, when nephritis is relatively common, and would be expected to develop if some congenital impairment of the renal secreting surface existed.

If this condition, both in the newborn and the adult, was strictly congenital, it would seem as though the percentage of its occurrence or deaths from it would be greatest in infants and decrease toward adult life. However, the facts show the reverse. The cases occurring in adults, therefore, mostly between the ages of thirty and fifty years, would seem to have developed entirely independently of any factor present at birth, but were the result of an hereditary tendency, which developed in middle life.

CASE REPORTED OF HEREDITARY TENDENCY

Occasionally reported family histories illustrate this hereditary tendency. The following is a striking example:

CASE I. Nov. 23, 1917. Male, aged 48 years. Complaint indigestion.

F. H.—All previous cases in the family occurred on his mother's side as follows: mother's

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father died at 55 years, mother at 38 years; two aunts (mother's sisters) at 46 and 52 years; one cousin at 45 years, one brother at 35 years; one sister at 38 years. Of these eight cases the diagnosis of six was proved by autopsy, and the other two by excellent medical authority.

Of the eight cases (including the patient) five were females and three males. The patient had lost three infant children, causes unknown, and had one daughter living and well.

P. H.—in abstract. The gastro-intestinal



Figure 1. Case 1, right kidney.

symptoms were quite typical of duodenal ulcer, including hunger pains, relieved by food, sour eructations, vomiting, loss of weight and the whole group occurring periodically. The urinary history was that of hematuria, occurring three or

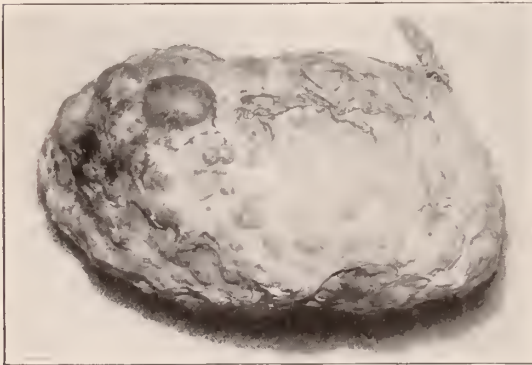


Figure 2. Case 1, left kidney.

four times during one month, a year ago. Frequency was normal. There had been no pain. He had been under various medical care, including a rest cure for the digestive disturbances and had from another source been advised to undergo left nephrectomy.

P. E.—showed a well developed, well nourished man of spare build, no deformities. Heart not enlarged. Chest normal. B. P. 158-98. This was the highest seen at any time, and was associated with a double plus albumin and a few hyaline casts.

Both kidneys palpable, of about equal size, ex-

tended well below the navel, were not tender and presented marked irregularities; movable on inspiration.

The following special observations were made. Cystoscopy showed both ureteral orifices open, rigid, thick edged, no inflammatory reaction. Number seven catheters passed to kidneys, the flow was periodic. Phthalein intravenously returned to the amount of 4.8 per cent. from the right side and 1.2 per cent. from the left in one-half hour. There were a few casts, a double plus albumin and a few W. B. C. from both sides. Cultures from both sides were sterile.

The Mosenthal test showed a fixation of the specific gravity between 1.012 and 1.014; no nocturnal polyuria, as might be expected, there being 1175 cc. during the day and 285 cc. during the night. The day total nitrogen excretion was 9.35 grams; that for the night 1.64 grams—a total of 10.99 grams in 24 hours, about one third normal.

Of the nitrogen 71 per cent. existed as urea n., 4.8 per cent. as ammonia n. The blood contained 24 mgm. of urea n. per 100 cc. slightly above normal. Blood examination showed R. B. C. 3,800,000, W. B. C. 7,200, Hg. 65 per cent. Wassermann negative.

This man showed therefore a rather marked anemia, a greatly lowered nitrogen excretion, moderate nitrogen blood retention and a functional test showing greatly reduced renal activity. That he would have gastric disturbance should be expected.

He was advised to live in Florida. My experience with another case, to be noted later, convinced me that this is a wise procedure. He failed to act upon this advice.

Three years later a winter's hard work, and a very slight right basal pneumonia resulted in death. The temperature after an initial rise to 100° subsided to below normal, the pulse to 56-60, respirations to 14; the blood pressure was 130-80.

His blood now showed non-proteid nitrogen 200 mgm. per 100 cc. and creatinin 4.12 mgm. per 100 cc. of blood, or eight times the normal. We were unable to establish thorough diaphoresis.

Autopsy six hours post mortem showed the usual typical condition of polycystic kidney, the left weighing 4½ lbs., the right 4¼ lbs. There was a right basal gray hepatization and dilation of the right heart. There was no gastric nor duodenal lesion.

SURGICAL TREATMENT

The surgical treatment of this condition has been chiefly limited to its complications of stone and infection. Nephrectomy is absolutely contraindicated. When it is remembered that one organ may increase to large size, while the other remains unpalpable, the value of this conclusion is evident. In one of my cases the small kidney increased rapidly within two months, having been potentially polycystic. However, Rovsing

has suggested and practiced exposing such kidneys and incising the cysts with the view of removing the intra-renal or cystic tension. Several authors have followed this suggestion. Lund, after four cases so treated, noted improvement in all. The longest duration of his four cases was under observation only three years, and their ages ranged from 35 to 50 years. This is the average age of adult cases so his records prove nothing.

Hagner and Steiner report unsatisfactory results. As a means of carrying a patient past the symptoms of acute retention, evacuation of the cysts and relieving intra-renal tension may be of value. Marked increase in intra-capsular tension limits circulation, and if blood pressure is not sufficient to counterbalance this, secretion will cease. It has been shown in experimental hydronephrosis that a pressure within the sac of 70 mm. of Hg. causes cessation of secretion, (Ghoreyeb). The pressure on the renal parenchyma from a tense hydronephrotic sac is no different in effect from that exerted by a conglomeration of cysts held firmly within a fibrous capsule. Hence, we must conclude that the pressure of these tense cysts in polycystic kidney limits the renal circulation, the nutrition of the renal tissue and urinary secretion.

INFLUENCE OF CYST PRESSURE ON RENAL CIRCULATION

With the object of determining the influence of the cyst pressure on the renal circulation the following experiment was performed with the cystic kidneys of the above case. Normal saline was perfused through them at an arterial pressure of 130 mm. of Hg. The average of several observations was 315 cc. returning through the vein in five minutes. Without changing the pressure or flow, but allowing it to go on continuously, many of the cysts were aspirated with a record syringe, and fine needle; 365 cc. of fluid were thus aspirated from the cysts of one kidney. While so doing the manometric pressure fell from 130 to 10 mm., although the flow was continuous. The pressure was readjusted at the normal. Now during the same period of five minutes the volume flow through the kidney was 1965 cc., over five times the volume flowed before aspiration.

It is apparent from this observation (which should be repeated) that the cystic pressure does limit the renal circulation. Evacuation of the cysts as a therapeutic measure during acute retention at least would seem to be justified. This might be accomplished by a long needle through the flank under local anesthesia and might be repeated from time to time as indicated. Whether or not it would be of any permanent value is questionable, since the cysts refill after being emptied.

As a more permanent form of cyst drainage in those cases able to stand operation, we should consider the following: exposure of the kidney,

incision and evacuation of the cysts by longitudinal incisions, splitting the kidney, being careful not to open the pelvis which is very large in this condition. As many of the larger cyst walls as possible should be removed. Into these long incisions should be stitched strips of the fatty capsule, renal fascia and peri-renal fat, the object being to favor absorption of fluid and prevent reformation of the cysts. This operation can be done in some cases under local anesthesia.

CASE REPORTS

The following three cases were seen before the case above reported. Two refused operation, and the third was seen in another city in consultation, and passed from further observation.

CASE II. Nov. 11, 1916, Male, aged 30 years. Complaint dizziness.

F. H.—Father and mother dead from causes unknown, though the present condition could be ruled out. Five brothers and four sisters living and well. Patient has two children living and well; none dead. Such a wide variance from the former history is evidence that heredity is not alone the cause. Only a small percent of the adult cases reported in the literature show a family history of the condition.

P. H.—No serious illness until typhoid three and half years ago; in bed six months. At four and a half months noticed a painful swelling beneath left costal border; spleen or kidney? Increased urinary frequency at the same time. *The dizziness of which this patient complained is noted in the literature as a characteristic primary complaint.* It was the major complaint in two of my four cases. Patient is subject to headache and sore throat, has dyspnea on slight exertion; his feet and legs swell easily.

P. E.—Well built, fairly nourished, waist and hips distinctly feminine. No deformities. Heart shows a rough mitral murmur, with hypertrophy. Both kidneys are easily palpable, the left is the larger and they are irregular, moderately tender and move with respiration.

Cystoscopy. Marked bullous edema about both orifices. Number seven catheter passed easily. Flow periodic. Urine from both sides contained a trace of albumin; W. B. C., calcium oxalate, no casts. A very low but practically equal amount of urea in both (Rt. .277 gm., Lt. .270 gm. per 100 cc.). Twenty-four hours' urine amounted to 1500 cc., amphoteric, with a Sp. Gr. of 1.005.

Gross Phthalein Output

1st hour 240 cc. no phthalein
2nd hour 250 cc. trace of phthalein
3rd hour 320 cc. no phthalein.

Blood examination showed R. B. C. 3,280,000, W. B. C. 5200. Wassermann negative. Non-proteid nitrogen 305 mgm. per 100 cc., B. P. 176-110.

Patient developed an acute mastoiditis and

was successfully operated under local anesthesia by Dr. Tuckerman.

Subsequent course was that of uremic coma and death. Autopsy proved the diagnosis.

CASE III. Oct. 19, 1908. Female, aged 51 years. This was the first case seen 12 years ago.

Complaint. Dizziness and fainting, the patient having been picked up on the street unconscious.

F. H.—No cases of cystic kidney in the family; patient single.

P. H.—At four years of age had some painful condition of the joints without fever or swelling (infantile scurvy?). At 18 years of age had some form of anemia with edema of the legs from which she entirely recovered. At 42 years of age had backache for three months with sediment of urates, relieved by free water drinking. At 45 years had attack of chills and fever, with first dizziness and nausea. At 47 years (four years before first seen) noticed a tumor in the left flank, had severe fainting and was in hospital under Dr. Billings and Dr. Senn in Chicago, who made the diagnosis of polycystic kidneys.

P. E.—Well developed and nourished, small build. Heart slight left hypertrophy with mitral murmur. When seen in attack she had a subnormal temperature, slow pulse and respiration, both kidneys were palpable, the right being very large and irregular moving with respiration, tender on pressure. Urine scanty, high colored, Sp. Gr. 1.030, albumin a trace, few W. B. C., no casts. She reacted well, the urine becoming of large volume, low specific gravity and characteristic of the condition. It contained .455 gms. of nitrogen per 100 cc. a total of only 7.9 gms. for 24 hours.

Cystoscopy showed the ureteral orifices rigid, open, normal size, no inflammatory reaction. No phloridzin glycosuria resulted one hour after injection. Methylene blue appeared in 85 minutes.

This patient was very active in a responsible business position. She had repeated attacks of uremia with B. P. of 160 to 180, diastolic around 100, from each one of which she recovered, after hot packs and rest. Theobromine was especially efficient. At this time the left kidney increased from one just palpable to a very large size, irregular, filling the left flank, all within two months time. She was advised to live in Florida during the entire year. She has done so for twelve years, and is in perfect health at 63 years of age. There is an apparent marked reduction in size of her kidneys as shown by palpation and waist measurements.

CASE IV. December 15, 1917. Female, aged 26 years.

F. H.—Negative. Two children living and well.

P. H.—Four years ago she had an attack of severe pain from the right kidney to the bladder,

with hematuria. Has had numerous attacks since. The kidney had been operated before seen in consultation, no stone found, but a typical polycystic condition was present.

Cystoscopy showed the right opening everted, fixed, pale. Phthalein right 11 per cent., left 34.5 per cent. in one half hour. Cultures negative. Blood contained 11 mg. total n. per 100 cc. Both kidneys were palpable, irregular and tender, the right much larger. This is apparently an early case and unfortunately passed from further observation.

DIAGNOSIS

With our modern methods, polycystic kidney should obviously be diagnosed more often than has been the case.

Characteristics: 1. A large irregular, nobby, body in the flank, slightly or not at all tender, moves with respiration. Absence of a history suggesting pyonephrosis. A combination of the two is possible.

2. The condition is bilateral. However, one kidney may remain small and only potentially cystic.

3. Presence or absence of a family history of the condition, not conclusive.

4. Attacks of dizziness or fainting without sufficient cause, in an otherwise healthy young or middle aged adult. Persistent dyspepsia.

5. A clear urine of low specific gravity, with a small amount or no albumin, and few or no morphological elements.

6. A very low "phthalein" output, incompatible with the urinary volume. This is especially characteristic, the phthalein being entirely absent or reappearing in a percentage below ten. This condition with the renal enlargement mentioned in I is almost diagnostic.

7. Occasional, though not persistent, hematuria. It occurred in 19 of 78 cases collected by Morris.

8. Increased blood pressure, cardiac hypertrophy and accentuated aortic closure.

CONCLUSIONS

In conclusion, I wish to draw attention to the following:

1. The ease of diagnosing polycystic kidney.
2. The effect on the renal circulation of experimentally emptying the cysts, resulting in a freer perfusion of saline under normal pressure.
3. The above mentioned therapeutic applications of this observation.
4. The value of the proper blood nitrogen determinations.
5. The perfect health of a patient who has lived twelve years in Florida with apparent reduction in size of the cystic kidneys.

465 ROSE BUILDING.

A Resume of the Treatment of Eclampsia*

Magnus A. Tate, M. D., F. A. C. S., Cincinnati

Editor's Note.—Dr. Tate's consideration of the treatment of eclampsia reveals in resume the following facts: That the mortality in the past has been from 20 to 45 per cent. maternal, and from 30 to 60 per cent. fetal; that eclampsia is still a disease of theories with as yet no definitely accepted cause; that it is usually treated along theoretical lines; that some cases will recover without treatment and that others will die no matter what treatment is given; that some cases seemed doomed from the beginning of the first seizure, especially patients having damaged kidneys; that, as far as we know, we can only describe eclampsia as a symptom-complex disease, which, for want of a better term, we call toxemia; that eclampsia is usually synonymous with convulsions but may be present without convulsive seizures; that most of our obstetricians have their favorite plans of treatment that they are loath to change for better methods; that the role played by the ductless glands is an open question, as well as whether the placenta has some peculiar internal secretion detrimental or otherwise to woman's welfare; and finally that better results are obtained if eclampsia patients are treated in hospitals than in private homes.

I PLACE before you, in a condensed form, a resume of the treatment of eclampsia, leaving much of the personal element in the background, not touching upon the phases purely theoretical, and trusting that by discussion, emphasis may be placed upon some of the important features which will prove of benefit to all concerned.

PERTINENT FACTS REGARDING ECLAMPSIA

In consideration of the treatment of eclampsia, a resume reveals the following facts:

1. That the mortality in the past has been 20 to 45 per cent. maternal, and 30 to 60 per cent. fetal.

2. That it is still a disease of theories with as yet no definitely accepted cause.

3. That it is usually treated along theoretical lines.

4. That some cases will recover without treatment, and that others will die no matter what treatment is given.

5. That some cases seem doomed from the beginning of the first seizure; and especially does this occur in that unfortunate group, the patient having damaged kidneys.

6. That as far as we now know we can only describe eclampsia as a symptom complex disease which for want of a better term we call—*Toxemia*.

7. That eclampsia is usually synonymous with convulsions; yet this is not always true as some cases have all the important symptoms of eclampsia (such as coma, blindness, edema, a suppression of urine, album and casts) without a convulsive seizure.

8. That most of our obstetricians have their favorite plans of treatment, which have given them average results, and they are loath to change, even if better results are reported from other modes of treatment. Hirst's statement here seems *apropos*, "No one can secure the best possible results in eclampsia by becoming frantically attached to a single plan of treatment."

9. That the role played by the ductless glands is an open question; as well as whether the placenta has some peculiar internal secretion detrimental or otherwise to woman's welfare.

10. That better results are obtained if patients are treated in hospitals than in private homes.

METHODS OF TREATMENT

From a systematic and symptomatic standpoint the acknowledged treatments may be grouped under three headings, namely, medical, obstetrical and surgical.

Medical Treatment.—During the past few years it has been emphasized by the thinking profession that pre-natal care is of great importance. This has now become a fact that few dispute, but alas, it is not a universal practice. It is a common occurrence for some women to go into the parturient state without ever having had a personal history recorded, pelvic measurements taken, urine examined, or proper advice given as to hygienic measures, food or clothing. Attention is now repeatedly called to the following, that if a patient has had an attack of eclampsia, the urine should be carefully examined for some months following the attack.

That all cases of eclampsia are preventable by general care of the body, diet, and even the induction of premature labor, is a statement which is surely debatable and is not accepted by the profession; but that most cases can be carried through the pregnant, parturient and puerperal state without convulsive seizures is true. So important to the general welfare of woman and child is the judicious care of the pregnant state that efforts are now made through journals, magazines, and societies, to educate expectant mothers along this line.

Drugs are undoubtedly of value, two standing out pre-eminently, *namely*, veratrum viride or veratrone, and morphia. The former drug has still some enthusiastic supporters, who believe implicitly in its action, but most of our recognized authorities now give it little intrinsic value, and consider it dangerous on account of its markedly depressing effects. It is also claimed by those who have discarded veratrum viride that

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its depleting and depressing influence has a deleterious effect on child. Those who believe it to be the drug most efficacious in the treatment of eclampsia say: that the non-believers do not know how to use it, become frightened and resort to other measures and hence secure no results.

Morphia is a standard drug, is used throughout all civilized countries, and if statistics be reliable, is of great value, but it should be used with care as undoubtedly it has been the means of producing morphine poisoning and death in children.

Attention is repeatedly called to that class of cases in which the patient is known to have an interstitial nephritis, that morphia is here contraindicated, and if given it acts as a direct poison and hastens death.

J. Clifton Edgar, at one time an advocate of active medicinal and surgical treatment and bitterly opposed to the use of morphine in eclampsia now says that experience in the last five years has radically changed his views and teaching. At one time an enthusiast in the free use of veratrum viride in eclampsia, he now frankly confesses to having changed his views as he fears the shock effect of veratrum drug, and in only a few selected cases will he use it, and then only in small doses.

McPherson states: you may say you do not believe in the treatment by morphine, but the figures of cases treated only shows a certain thing, and it is up to the men who say that their cases treated in the other ways do better. The best figures in this country have been produced by the Sloan Maternity Hospital, a maternal mortality of 14 per cent. McPherson under morphine reduced this mortality to seven per cent. in 55 cases.

Stroganoff's mortality with the use of morphia and chloral of hydrate of only 8.9 per cent. in 839 cases has made a marked impression upon the profession.

It should be remembered that morphia and veratrum viride are incompatible—one destroys the effect of the other. This was repeatedly called to the attention of the profession by the late Dr. Thad Reamy, a warm advocate to the use of viride veratrum. From a statistical mortality standpoint, the use of veratrum viride does not seem as efficacious as morphia—and if reported results be a criterion the mortality rate is much higher with veratrum.

Other drugs mentioned, with the exception of chloral, such as the bromides, thyroids, et cetera, have all been found of questionable value. Pilocarpine has now been discarded as it was found to produce an edema of the lungs in so many cases.

Chloroform was used extensively until our pathologists drew attention to its deleterious effect on the heart and liver, and ether is likewise now rarely used. Arthur Dean Bevan claims that chloroform and eclampsia produce identical injuries, therefore it adds to the danger of eclampsia and should never be used.

Members of the profession are now wise to this phase of eclampsia; that the system is overwhelmed by some toxic material, and that nature tries its best to relieve the system of this poisonous material, but it is hampered by the increase being in excess of the output. So one of the first endeavors, (if eclampsia be a toxemia), is to relieve the system of this poisonous material, and this can be accomplished to a certain extent by means of the alimentary canal and the skin.

Washing out the stomach immediately upon entrance to hospital is of great value, for it relieves the system of a nasty cesspool. A dose of epsom salts or castor oil introduced through the tube, following stomach washing, will soon produce a cleansing of the upper canal. Flushing of the lower bowel (with not a quart but gallons of water) is claimed to be of inestimable value, and is strongly advocated by many authorities. Sweating of the body, an old treatment, is said to be of value and has many adherents. They claim that sweating must be thorough, a regular steam bath, with head covered with an ice cap to reduce cerebral congestion; that it will reduce blood pressure and eliminate toxins. The withholding of cathartics and enemas until the uterus be emptied, for fear of contamination of operating field with feces is rarely followed out in actual practice.

Salt solution under the breasts is of value in exhausted cases and is practiced rather extensively. Intravenous injection is applicable only to a limited class of cases, and has not been accepted and practiced to any great extent.

Irving gives some interesting statistics which bear repeating. He says: if blood pressure was 130 to 140, one in 32 cases developed toxemia; if 140 to 150, one in 11; if 150 to 160, one in 3; if 160 to 180, one-half of the patients, while all those over 180 had toxemia. It has also been noted that often the blood pressure is not proportional to the amount of albumin. The taking of systolic blood pressure can at least do no harm, and may be a warning symptom. Attention may be called, at this point, that if the reduction of blood pressure be of great import, it can be accomplished not only by venesection, veratrum viride, and sweating, but also by the puncture of membranes.

Direct ophthalmoscopic examination might be of great service to us in those cases, where we are convinced that labor should be brought on in the earlier months, and not allowed to progress toward the true eclampsia state. If there be some progressive cloudiness of fundus, we feel sure that the case is developing retinitis, which if allowed to go on might lead to hemorrhages and loss of vision.

Venesection, extensively practiced years ago, is now being advocated by some whose claims merit serious consideration. They say it is called for in those cases where the pulse is full and strong, blood pressure 175 or over, face deeply cyanosed,

breathing labored, and with frequently recurring convulsions. We are further told that it is wise to withhold venesection if labor is almost completed, as the bleeding of labor, plus the pint withdrawn may be just the necessary addition to cause death.

If venesection is not practiced it is wise to remember that the placenta should not be hurriedly delivered as bleeding should be encouraged rather than checked. Williams believes that venesection is the treatment *par excellence* and says irrespective of the condition of pulse it is always advisable, and that if prompt recovery does not follow venesection, delivery should be effected consistent with the safety of patient.

In the cases reported under the impression that it might relieve the toxic congestion in central nervous system, lumbar puncture did not seem to alter results one way or another, and authorities now classify it as only one of the adjuncts, which have been tried, just as was decapsulation of the kidneys.

Obstetrical.—One of the first laws which meets with the concurrence of all authorities in handling these cases is to see that the patient is protected from self-injury during a convulsion. Not to forcibly hold her down, but just to keep her from inflicting self-injury; remove false teeth; protect the tongue, and mop mucus from throat and mouth, gently turning the patient's head to one side. It seems hardly necessary, yet it is so essential, that quiet should be exercised, that neighbors and visitors be excluded, that loud talking and whispering be barred.

Do the convulsive seizures cease upon emptying the uterus, and is this always justifiable and the thing to do?

Here authorities differ; some claim that if the uterus be emptied seizures will cease, and others say they usually do; as stated by various authors the percentage varies from 60 to 93 per cent. This fact however is known to observers that in cases where the child dies there is usually an improvement in the condition of woman. Whether you place yourself from the experience standpoint into one or the other group it has been only too truthfully asserted that this procedure deserves most serious consideration, and it has been the means of saving many who would otherwise perish.

A general rule now followed by many is that if the os be dilating and woman in labor, it is a good practice to aid nature and hurry delivery, but if the os be not dilated and the woman not be in labor then we should rely on medicinal measures, provided the case improve. If the seizures continue in spite of heroic medicinal measures we have, no alternative but to deliver the woman. It is often asked how many seizures should occur before we resort to accouchement force? This naturally depends upon the character of the seizures and whether their force seems to be ameliorating or not. If they continue strong au-

thorities state that no case should be allowed to have many seizures without interference, as the patient has a better chance to recover if delivered than if undelivered. I find that it is becoming more and more the practice of obstetricians where they encounter cases that do not yield to treatment to resort to delivery, and from Williams' text-book I quote the following statement: "That there is a marked difference in statistics between the expectant, which yielded a mortality of 28 per cent. to the active 6 to 11 per cent."

Surgical.—Under this heading comes strictly forcible dilation, forceps, version, vaginal and abdominal Caesarean section, following out a rigid aseptic technique. The stand taken by some that no surgical intervention should ever be practiced does not meet with the approval of the profession at large. Even those who believe that most cases can be handled better from the expectant medicinal standpoint grant that surgical intervention is called for in some cases. The argument advanced for non-interference is that any attempt, no matter how skillful the operator, exposes the patient to the risk of lacerations, hemorrhage, shock and infection.

Forcible dilation followed by forceps delivery or version is a matter of experience and judgment; such cases being laws to themselves and are handled accordingly. I find that it is the consensus of opinion that vaginal Caesarean section should not be attempted beyond the seventh month, as the anatomical relations and size of child would make it an operation of almost unsurmountable difficulty. This operation is applicable, the woman not being in labor, os not dilated and rigid, with seizures strong and frequent, and is a means of saving many women where rapid delivery is essential. That it is being performed quite frequently can be attested by the numerous case reports found in literature.

Abdominal Caesarean section for eclampsia yields a mortality of 25 to 50 per cent. and has at the present time not met with much favor as it is conceded that eclamptic women do not stand abdominal Caesarean section well, and Peterson's statistics, in over 1,000 collected vaginal and abdominal Caesarean sections, bears this out for the mortality reported was 25 per cent. Hirst states, however, that when his patients do not respond to elimination treatment he turns to abdominal Caesarean section as the operation of choice. This statement does not apply to cases of eclampsia complicated by disproportion between mother and child, or deformity of pelvis; here we have definite indications for Caesarean section.

Eclamptic Seizures.—In the puerperal state eclamptic seizures are usually grave; fortunately they do not occur frequently and are met along the usual medicinal lines of treatment. In these cases venesection, unless the patient be greatly debilitated, is said to give excellent results. The

child should not nurse the mother until recovery is assured.

CONCLUSIONS

It is somewhat unfortunate that the profession has in the past jumped from radicalism to conservatism and vice versa, but there is now a somewhat enlightened conservatism being accepted, and that is: first study the case, and second, fit your treatment to this individual case. Further-

more it is also agreed that in the absence of skilled council both mother and child have a much better chance with the conservative expectant than with the radical treatment. Personally I know of no class of cases where sound judgment, plus obstetrical skill, is of more importance than in the handling of those afflicted with eclamptic seizures.

19 WEST SEVENTH ST.

Observations On the Treatment of 64 Cases of Eclampsia*

W. D. Inglis, M. D., Columbus

Editor's Note.—The idea that every ante-partum or intra-partum eclamptic should have the uterus emptied immediately is so prevalent, that it is often with difficulty that physicians can be convinced that there are other procedures in treatment less dangerous than accouchement force and Caesarean section. Furthermore there is urgent need that the pernicious practice of using chloroform as a sedative and anesthetic, should be given up, since pathologists report that its use duplicates the lesion of the toxemia in the liver and kidneys. The professional keynote in the treatment of all toxemias of pregnancy is prophylaxis. The results of watchful care of all pregnant women will almost rule out eclampsia, but insufficient pre-natal care means one eclampsia case in every 100 parturients. Pre-eclamptic cases should be sent to a hospital for treatment for there only can perverted food metabolism be prevented and a catharsis be maintained sufficient to eliminate the toxins of the condition. If this is not readily accomplished then the termination of pregnancy becomes the problem.

MY reason for reporting 64 eclampsia cases, and drawing conclusions from the treatment of the same, is merely to give a little help in correcting the chaotic ideas relative to this subject, that still seem to exist in the minds of many men practicing obstetrics.

The idea that every anti-partum or intra-partum eclamptic should have the uterus emptied immediately, is so prevalent, that it is often with difficulty that we can convince physicians that there are other procedures in treatment, less dangerous than accouchement force and Caesarean section.

Furthermore there is urgent need that the pernicious practice of using chloroform as a sedative and anesthetic, should be given up, since pathologists tell us that its use duplicates the lesion of the toxemia in the liver and kidneys.

Over 70 per cent. of the 64 cases of eclampsia came from villages and rural districts, and many of them were transported to the hospital after a long drive in an ambulance. It is highly essential that if such a journey is undertaken, the patient should be sufficiently narcotized to control convulsions. This may be accomplished by morphine per hypodermic and by chloral per rectum.

GROUPING OF CASES

There are no remarkable results in this list of cases when taken as a whole, since 15 cases died out of a possible 64.

It would seem best that we divide these cases into 3 groups namely:

(1) Those treated by accouchement force.

(2) Those treated by Caesarean section.

(3) Those treated by conservative methods which aim at controlling convulsions and eliminating toxins.

In the first class (10 cases) treated by accouchement force, there was a maternal mortality of 30 per cent. and a fetal mortality of 60 per cent.

In the second class (11 cases) treated by Caesarean section, there was a maternal mortality of 27.2 per cent. and a fetal mortality of 27.2 per cent.

In the third class (43 cases), there was a maternal mortality of 20.9 per cent., and a fetal mortality of 41.8 per cent.

THE SWING TO CONSERVATIVE METHODS

In reporting these cases and their treatment, I must say regarding the latter, that it has embodied almost every variety of treatment, sometimes radically surgical, at other times pursuing the use of drugs such as veratrum viridi, chloral, chloroform, bromides, morphine and scopolomine, along with various diaphoretics and diuretics.

However after having been in attendance at the Dublin Rotunda Hospital, and having observed their results in the treatment of this disease, as well as the results obtained by many maternities of this country, after they abandoned a radical surgical treatment for a more conservative one, I have of late years, pursued conservative methods.

As one reviews the medical literature of the last year or two, he cannot help but be impressed with the fact that the pendulum is swinging away from the radical surgical side, to the more or less conservative line of treatment.

Furthermore, the advocates of radical treat-

*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

ment are to a great extent general surgeons and not obstetricians.

If we would accomplish the best results for our patients, we must attempt three things.

(1) Control convulsions, since the frequently recurring convulsions weaken and kill the patient.

(2) Eliminate toxins.

(3) Avoid shock and trauma.

While surgical interference often helps to control convulsions,—and to a lesser extent eliminates toxins,—it always does produce more or less shock and trauma.

Furthermore it renders a patient less amenable to the good results of general elimination in the after-treatment.

It must be remembered that in our eclamptics, there is a heightened irritability of the nervous system to such a degree that even noises, bright lights, examinations or labor pains may induce a convulsion. So much the more will major operations and manipulations within the uterus produce convulsive seizures and shock.

DISCUSSION OF RADICAL MEASURES

In the cases treated by accouchement force, you will note, we have the highest mortality rate.

Any careful obstetrician will agree that manual or instrumental dilation of the cervix means tearing the cervix, and tearing the cervix means sometimes death and either hemorrhage, sepsis, scar tissue or semi-invalidism in the majority of cases.

Accouchement force should now be an obsolete term and never used in modern scientific obstetrics, since the shock and trauma it produces are as dangerous as the disease we attempt to cure.

Dührssen's vaginal Caesarean section and abdominal Caesarean section may have a place in the treatment of eclampsia, but their utility is very limited. The former is sometimes though rarely conceded an asset in treatment in the eighth month or when the fetus is small.

The value of abdominal hysterotomy may be summed up admirably in the words of our own Dr. Gustave Zinke:

"Caesarean section may be chosen as a just procedure in cases of sudden and profound eclampsia, or severe toxemia in a primigravida when associated with an elongated or unobliterated cervix, acute suppression of the urine, general edema and cyanosis. In the milder cases of this disease, when the life of the child is considered equally as important as, or more important than the life of the mother, the operation finds a justification. Intelligent medical care, however, has so greatly decreased the maternal mortality of eclampsia that Caesarean section will seldom be necessary. This fact, more than anything else, renders Caesarean section almost entirely unnecessary in the treatment of eclampsia."

The eleven Caesarean sections, which I report, were performed by general surgeons, ably fitted

and accustomed to abdominal surgery, and not done by an obstetrician, who only occasionally attempts a celiotomy.

Two of the three fatal cases were performed in primigravidae, shortly after the first convulsion began.

Three of the cases recovering, had such a stormy period following the section that their lives at times were despaired of.

While I have endeavored to adopt a conservative treatment of late, I have on two occasions, suggested a termination of pregnancy by Caesarean section. The operation was performed on a 15 year old primiparae who was unconscious and very edematous, and who had had seven convulsions before entering the hospital.

The usual sedatives were effectively employed, with the result that elimination was established and consciousness returned, but the blood pressure remained 180 and the urine showed much pathology in the kidney. Consequently after bagging the patient to little avail, a Caesarean section was performed which resulted in recovery for mother and child. The thorough course of elimination for two days prior to the section, perhaps favored this patient's recovery.

The second Caesarean section was suggested, during the past few weeks, in a young primipara at term. The fetus was large and presenting as a face, well moulded and fixed in the brim, since the membranes had ruptured the day previously. Both mother and child recovered though the mother's convalescence was a stormy one.

An argument against Caesarean section from an obstetrician's point of view, is the fact that a scar remains in the uterus; and this scar may be productive of a ruptured uterus in subsequent pregnancies and labors.

Some clinics report 11 per cent. of such cases rupturing the uterus in subsequent labors.

Peterson of Ann Arbor, reported 500 cases delivered by section, with a maternal mortality of 34.8 per cent. He also reports 615 cases operated early, with a mortality of only 15.9 per cent.

We might contrast these figures with the rates announced by the Russian, Stroganov, 6.6 per cent. in 360 cases; Tweedy, of Dublin, 9 per cent. and Zinke of Cincinnati, 13.3 per cent.

CONSERVATIVE TREATMENT AND ITS RESULTS

The Sloan Maternity, under a reasonably conservative treatment, reduced their maternal mortality rate in eclampsia, from 28.3 to 14.5 per cent.

Nineteen late cases in my own practice were treated conservatively, with the result that two died giving a maternal mortality of 10.5 per cent., and a fetal mortality of 31.1 per cent.

In this list, one of the fatal cases died two hours after entering the hospital, having had several seizures in the 5 hours before coming to the hospital. The second fatal case died from lobar pneumonia 3 days after convulsions ceased.

The routine treatment for these ante-partum and intra-partum cases is morphine for the control of convulsions, given to a degree sufficient to limit respiration to 8 or 9 a minute. Chloral is generally advised as a preliminary sedative. As soon as the patient begins to show a narcosis, the stomach tube is passed and a thorough lavage of the stomach is given, after which 2 or 3 ounces of a saturated solution of magnesium sulphate and 2 drops of croton oil are passed through the stomach tube. As soon as this is accomplished, 6 to 8 gallons of a soda bicarbonate solution are given through a high rectal tube. Both of these procedures are repeated after an hour or two.

If the patient is in the second stage of labor, delivery is accelerated in the easiest possible way.

Quiet surroundings and a darkened room are insisted upon.

Veratrum viridi per hypodermic is sometimes resorted to, to lower blood pressure when there is a full bounding pulse. Venesection likewise may be practiced, but these latter measures are often unnecessary and may be fraught with some danger.

One patient in this series, had an accidental internal hemorrhage of 1,300 cc. before the convulsions came on, but in spite of this complication the blood pressure on reaching the hospital was 182.

Two patients in the series, dislocated the shoulder joint during convulsions.

CONCLUSIONS

The professional key-note in the treatment of all toxemias of pregnancy is prophylaxis.

Polak reported only 2 eclampsics in 3,200 cases in one of his pre-natal clinics.

My own experience has, up to 1,850 cases, showed 2 cases of eclampsia, both of whom were under treatment. The cases were the mild type, one and three convulsions respectively, which were excited by the labor pains.

The results of watchful care of all pregnant women will almost rule out eclampsia, but insufficient care means one eclampsia case in every 100 parturients according to the statistics of our large lying-in hospitals.

If every woman in pregnancy could be instructed as to her diet, exercise and general mode of living, and could have the dangers of toxemia impressed upon her, and have bi-monthly and later weekly urinalyses made, taking blood pressure and weight at the same time, the vast majority of toxemias of pregnancy would be discovered in time to prevent fatal consequences.

Pre-eclamptic cases should be sent to a hospital for treatment for there only can perverted food metabolism be prevented and a catharsis be maintained sufficient to eliminate the toxins of the condition.

If this is not readily accomplished as evidenced by the falling blood pressure and improved con-

dition of the kidneys, the patient should be bagged and pregnancy terminated.

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 137. E. STATE ST.

NEW AND NONOFFICIAL REMEDIES

Benzyl Alcohol—Ipcó.—A brand of benzyl alcohol (See New and Nonofficial Remedies 1920, p. 27), complying with the N. N. R. standards. Intra Products Co., Denver, Colo.

Ven Sterile Solution Benzyl Alcohol 4 per cent. 2 cc.—Each ampoule contains benzyl alcohol-Ipcó 4 per cent. in physiological solution of sodium chloride, 2 cc. Intra Products Co., Denver, Colo.

Misbranded Venereal Nostrums.—The following products have been the subject of prosecution by the federal authorities on the ground that the therapeutic claims made for them were false and fraudulent; Musser's Capsules (Musser-Reese Chemical Co.), consisting essentially of copaiba balsam and oil of santal with indications of oil of cubebs and oil of mace. Dr. Sanger's Capsules (Edward J. Moore Sons, Inc.), consisting essentially of copaiba, cubebs, santal oil, matico, licorice root and magnesium oxid. Rid-It Caps (S. Pfeiffer Mfg. Co.), consisting essentially of salol, oils of juniper and sassafras, turpentine, a fixed oil and coloring matter. Black and White Capsules (Wilson Drug Co.), consisting of capsules containing hexamethylenamine and of capsules containing a mixture of volatile oils, including cubebs and copaiba. Benetol (Benetol Co.), consisting essentially (in agreement with a previously reported analysis by the A. M. A. Chemical Laboratory) of alphanaphthol, soap, glycerin, water and traces of essential oils and alcohol. G-U-C Capsules (Hollander-Koshland Co.), consisting of a sulphurated oil with volatile oils, including copaiba, cinnamon and santal oils. Merz Santal Compound (Merz Capsule Co.), consisting of balsam copaiba, cassia, santal wood oil and a sulphurated oil. Enoob Antiseptic Injection and Capsules (Tropical Co-operative Co.), the "injection" being essentially a solution of phenol, menthol, thymol, boric acid and zinc sulphate in water, and the "capsules" consisting essentially of cubebs, copaiba, gum turpentine and pepsin with indications of santal oil. White Swan Injection (Stacy Chemical Co.), essentially a watery solution of boric acid, salts of aluminum, glycerin and phenol with bismuth subgallate in suspension (*Jour. A. M. A.*, Nov. 6, 1920, p. 1285).

The Treatment of Eclampsia*

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Editor's Note.—Since pregnancy is responsible for eclampsia, Dr. Updegraff considers its termination, by one method or another, as indicated by the first convulsion. Each case must be considered individually and that method of delivery adopted which seems safest for that particular case. Difficult forceps operations, forcible dilatation of the cervix, incisions of the cervix and vaginal Caesarean section have no place in the modern treatment of eclampsia at term. Multiparae, in the absence of obstructed labor, with their comparatively short period of prospective labor ahead of them, are good risks for the conservative treatment. Delivery by abdominal section is more particularly indicated in primiparae with rigid, undilated cervix, a living baby, intact bag of waters and no infective process in the birth canal. Abdominal intervention requires aseptic facilities and a competent surgical team. Ether is the anesthetic of choice.

THE first treatment of eclampsia consisted of bleeding combined with cutaneous excitation by sinapisms, et cetera, and it was expectant as regards the pregnancy. Next, bleeding was abandoned and diaphoresis came into vogue with the administration of narcotics, and expectancy still persisted towards the pregnancy.

Then came active obstetrical treatment with the abandonment of diaphoresis and diminished use of narcotics: Dühressen's vaginal Caesarean operation was performed as soon as possible. Others resorted to abdominal section.

THE CAUSATIVE FACTOR OF ECLAMPSIA

As to the cause of eclampsia, J. K. Brammer states, that we can say definitely only one thing, and that is that it is due to a toxin which affects the brain, kidneys, liver and motor mechanism.

Until recently it was generally believed that we had a kidney condition to contend with and the terms *pregnancy nephritis*, *albuminuria of pregnancy*, or the *kidney of pregnancy* were in common use. We were led to believe that the phenomena such as eclampsia, coma and dropsy were similar to those caused by uremia, which was produced in some manner by the pregnant state.

Now we know we have a different condition to deal with: a toxemia, produced by the presence in the blood of some toxic substance which affects seriously the function of certain organs. Our better knowledge has brought some improvement in the result of our treatment, but there is still much to be hoped for.

Certain changes may be found in the kidney. The toxins in the blood produce an irritation in the arterioles of the body with consequent vasomotor spasm and a rise in blood pressure. The arterioles in the renal cortex share in the general vasomotor contraction and prevent the flow of blood to the renal cells. These cells being deprived of their blood supply show all the manifestations of tissue starvation including a suppression of their eliminative function.

In some cases, a condition of the liver similar to acute yellow atrophy, is found.

THE PROPHYLAXIS OF ECLAMPSIA

The treatment of eclampsia should begin, of course, by instituting prophylactic measures early. In other words, the time to treat eclampsia is before it begins. This includes the routine examination of the urine and determination of blood pressure, regulation of bowels and diet, proper exercise and fresh air, headaches accounted for, control of hyperacidity, et cetera.

Convulsive toxemia, except in a comparatively small percentage of cases, is preventable. The symptoms of recurring toxemia are easily recognizable,—nausea, vomiting, headache, edema, scanty urine, constipation, eye symptoms, nervousness, high blood pressure, albuminum, casts, blood, indican and acetone in the urine, these are usually sufficiently plain. When convulsions occur, it is usually because we have not watched our cases as carefully as we should, because the patient did not apply for treatment early, or because she neglected or refused to carry out the simple preventive measures. I presume it would be safe to say that 50 per cent. of women go into labor without any pre-natal care whatever.

A certain few, the fulminant cases of hepatic toxemia, come suddenly with no edema, little change in the urine, and convulsions quickly following the onset of nausea, vomiting, headache, and visual disturbances, and this in spite of careful prophylaxis.

TIME-HONORED PRINCIPLES OF CURATIVE TREATMENT

Our time-honored principles of the curative treatment of toxemic convulsions, *namely* (1) control of convulsions; (2) elimination of toxins; and (3) termination of pregnancy; still hold good.

As to the method of treatment of the attack itself, there is a division of opinion with two distinct camps,—medical and surgical. One thing is gratifying, the general disfavor with which *accouchement forcé* is regarded. It seems certain that this brutal operation is responsible for much of the high mortality under the operative methods in vogue.

De Lee states that he has lived through three changes of treatment with a fourth seemingly

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impending. First, bleeding, strongly advocated then discarded. Next, morphine—proposed by G. Veit, and gradually abandoned. Next, medical treatment, sweats, purging, chloroform, chloral, morphine, and slow but hastened delivery. Then immediate delivery urged by Dühressen, particularly vaginal Caesarean section. And now the tendency to desert active methods and go back to morphine.

Since pregnancy is responsible for the eclampsia, its termination by one method or another is indicated as soon as a convulsion has occurred. So far all are in accord but the method to be employed with greatest safety to mother and child is responsible for the division of opinion at the present time.

ROUTINE CONSERVATIVE TREATMENT

R. McPherson, formerly an advocate of active treatment but later impressed by the good result of the more conservative treatment, notably from the Rotunda Hospital, began about three years ago to employ the medical treatment. His method may be given as an example of the present trend to conservatism. Briefly it is as follows:

Immediately on entrance, the patient's blood pressure is taken, a catheterized specimen of urine secured,—and the patient is put in a dark isolation room and as much quiet obtained as possible. She is then given a hypodermic of $\frac{1}{2}$ gr. of morphine sulphate; her stomach is washed out, two ounces of castor oil being poured down the tube at the end of lavage, and a colonic irrigation of five gallons of 5 per cent. glucose solution given. If the blood pressure is over 175 systolic, phlebotomy is done and sufficient blood is extracted to bring it down to 150. Phlebotomy is not done if the pressure is below 175; as if, for any reason much blood is lost during delivery, the pressure may be so low as to endanger the patient's life. The same objection applies to large doses of *veratrum viride ante-partum*.

The patient is now kept quiet and $\frac{1}{4}$ gr. of morphine given every hour until the respirations drop to eight per minute. At this time convulsions have usually ceased, the patient has fallen into labor and is usually delivered normally, or by an easy low forceps. Occasionally a little ether is necessary while waiting for the action of the morphine. In a series of 67 cases a corrected maternal mortality of 7.4 per cent. and a fetal mortality of 28.5 per cent. were obtained.

Hydrostatic bags may be used to induce or shorten labor, as well as manual dilatation of a soft, already partially dilated cervix to permit of a medium or low forceps operation.

Dr. Cragin recently presented comparative statistics of ten years work at the Sloane Maternity which show that the mortality in eclampsia of both mother and child has gone down about 50 per cent. because patients were treated conservatively.

For the unskilled practitioner the medical

treatment surely offers the best promise of success.

G. L. Brodhead emphasizes his belief that probably in a large percentage of cases abdominal section is unjustifiable. When the child is dead or not viable, the patient in active labor with the cervix dilated or easily dilatable, and she can not have a well equipped hospital and a competent surgeon, other procedures may not only be more advisable but absolutely indicated.

SCOPE AND UTILITY OF CAESAREAN SECTION

But, nevertheless, in a considerable number of cases, Caesarean section is probably the safest, easiest and most satisfactory treatment. In a primipara with unshortened and undilated cervix, with proper help and surroundings, it would be the advisable treatment, and it must be remembered that eclampsia is about four times more common in primiparae than in multiparae. The contra-indications are repeated, vaginal examinations, more particularly where the bag of water has been broken; and, of course, where unsuccessful attempts at delivery have been made, and where there is any infective process in the birth canal.

E. P. Davis states that he has long since abandoned abdominal section for toxic patients suffering from convulsions except when the patient is a vigorous primipara with unshortened and undilated cervix who has had few convulsions and does not respond to eliminative treatment. He feels, however, that there is a distinct field for elective section in the toxemia of pregnancy. When hygienic measures fail in the later months of gestation, toxemia steadily increases, there is no sign of labor, and active treatment of the toxemia fails to check its progress, although the patient does not have any convulsions, prompt delivery by section is indicated.

It is doubtful whether the intensity of the toxemia is an indication for Caesarean section except in primiparae with the prospect of a long labor ahead.

OTHER MEASURES

Decapsulation of the kidney has been mentioned but is applicable in only one class of cases, where there is an anuria—it has a good functional result in about 80 per cent. of cases.

Lumbar puncture has been done with apparent benefit, probably from reduction of intracranial pressure.

Glyceril trinitrate must be considered to reduce arterial pressure, and for its diuretic action. Others use glonoin. The cardio-vascular system must be supported by stimulants.

CONCLUSIONS

(1) Since pregnancy is responsible for eclampsia, its termination by one method or another is indicated as soon as a convulsion has occurred.

(2) Each case must be considered individually

and that method of delivery adopted which seems safest for that particular case.

(3) Difficult forceps operation, forcible dilatation of the cervix, incisions of the cervix and vaginal Caesarean section have no place in the modern treatment of eclampsia at term.

(4) Multiparae, in the absence of obstructed labor, with their comparatively short period of prospective labor ahead of them, are good risks for the conservative treatment.

(5) Delivery by abdominal section is more particularly indicated in primiparae with rigid, undilated cervix, living baby, intact bag of waters, and no infective process in the birth canal.

(6) Operations through the abdomen are attended with more risk than through the birth canal if done under unfavorable conditions, hence a suitable environment and a capable operator and assistants are necessary.

(7) Ether is the only anesthetic to be used for any operation. Chloroform is contra-indicated because of added strain on the heart and because of the similarity of the pathology of

chloroform poisoning to that of eclampsia. Nitrous oxide gas is said to increase blood pressure.

Finally, to quote Edgar: "A review of the present and prospective obstetric situation causes a recurrence of the reflection, that the very poor and the well-to-do are today receiving the best obstetric care, while those of the so-called middle class are the ones who, all too often, suffer from indifferent pre-natal attention."

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SECOND NATIONAL BLDG.

Operation for Empyema in Young Adults*

F. E. Bunts, M. D., Cleveland

Editor's Note.—After an extensive experience with the surgical handling of empyema in army hospitals, Dr. Bunts is of the opinion that the result of autopsy findings must be carefully considered before advocating any special line of treatment or operation. Deaths do not occur by reason of the method of operative procedure but on account of the inherent character of the pyemia present, which precludes the possibility of efficient surgical intervention. For this reason Dr. Bunts does not present his method of operation as being superior to others, but in view of its low mortality, of its comfort to the patient, its excellent permanent results and the cleanliness and absence of disagreeable odor in a ward full of these usually offensive smelling cases, as one worthy of routine use and consideration.

THE great prevalence of pneumonia in many of the U. S. cantonments and the resulting incidence of empyema, reaching as high as 10 per cent. in the Base Hospital to which I was assigned, brought to the surgical service about 175 cases for operation. I am not able at present to give the exact data, but certain clinical facts connected with this series of cases seem to be of special interest.

GROUPING OF CASES

All cases naturally occurred in young adults of army registration age, and while this may have no bearing upon the results, yet it must be granted that they should by the mere fact of their youth and of their having been admitted to service, after elaborate physical examinations, be presumed to be better risks than the average case in civil practice. Therefore to avoid the possibility of inherent differences in the varied cases found in civil practice, I have designated these cases in a group as young adults.

I. Classification.—In concurrence with the

Chief of the Medical Service, patients with fluid in the chest were divided into three classes:

- Those which presented clear fluid with no micro-organism;
- Those which presented slightly turbid fluid and various bacteria—staphylococcus, colon bacillus, or streptococcus hemolyticus;
- Those which presented frank yellow pus and bacteria.

II. Recognition and Diagnosis.—Physical examination often failed to reveal the location of the accumulated fluid, though its presence was practically certain. The use of the aspirating needle was freely resorted to and a considerable number of punctures were frequently made without successfully locating the fluid. This was due, to a considerable extent, to the fact that many of the accumulations were encapsuled, and particularly to the frequency of interlobar collections of pus.

To obviate the frequent and not always innocuous punctures, early use of the X-ray was made in cases able to endure such examination. This greatly simplified and rendered com-

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paratively easy the detection of the location of the empyema, and when stereoscopic plates could be made, immensely facilitated operative procedures.

HANDLING VARIOUS TYPES OF CASES

III. *Treatment.*—Class (a). These were aspirated by the physician in charge or upon request, by one of the surgical staff, but were not transferred to the surgical service.

Class (b). These were transferred to the surgical service, aspirated under primary ether anesthesia, and injected with a small amount of glycerin and formalin (2 per cent. solution). These were watched carefully from day to day, and a failure to show improvement or an increase in the severity of the symptoms was followed by immediate operation. In the neighborhood of 16 cases were treated in this manner, of which six or seven recovered without operation. Inasmuch as an occasional case under this classification recovered after aspiration without the injection of formalin, it is impossible to say that the latter was a curative agent in the others. All that can be said is that a number got well under its use, and that it did not seem to do any harm in any instance.

Class (c). These were all operated upon within twelve hours after their detection, except, and this I believe to be of importance, *those cases in which the high fever and physical signs showed the pneumonia to be still active or invading the opposite side.* In these the fluid was aspirated, sometimes repeatedly, until the pneumonic symptoms abated after which aspiration was done. It was a self-evident fact in these cases that the empyema was not the determining factor in the critical condition in which these patients found themselves, and a radical operation, or indeed any operation other than aspiration, would materially lessen their chance of recovery. This we found to be true, from serious clinical experience.

Anesthetic.—I have read and heard much discussion regarding the proper anesthetic to be used in these cases, some saying that only local anesthesia should be used, and almost all condemning the use of ether. In a few of the very worst cases when it seemed from the greatly debilitated condition of the patient that no general anesthetic would be tolerated, I used local anesthesia alone, but in all the others primary ether anesthesia was used, and, I believe, without any ill effects whatever; the patient being wide awake at the end of the operation. I have not seen severe coughing or respiratory embarrassments result from the proper administration of ether, and the temporary and transient loss of consciousness I believe to be an act of mercy to the patient.

Method of Operation.—Local anesthesia over the area of rib to be resected, followed by light primary ether anesthesia and rapid incision and

excision of bone, insertion of a long $\frac{3}{4}$ inch rubber drainage tube which was sutured into the wound, tight suturing of the wound about it and a clamp to the tube to prevent escape of fluid.

Subsequent Treatment.—The patient was put in a semi-recumbent position or the head of the bed elevated by blocks, and the tube end inserted into a drainage bottle attached to the side of the bed and containing some antiseptic fluid. The clamp on the tube was opened up for a few moments every half-hour, allowing a small amount of fluid to escape until the chest cavity was evacuated and danger of sudden respiratory or circulatory changes eliminated. The clamp was then removed entirely and drainage allowed to continue. At the end of a week or ten days, rarely earlier, the cavity was washed out twice daily with varying solutions, such as iodine, sterile water, normal saline, boracic acid, formalin and glycerin, and at two hour intervals when the Carrel-Dakin method was used. The large number of cases operated upon gave excellent opportunity to try out a series with each method. In from one to two weeks, when the discharge had greatly diminished, the large tube was removed and progressively smaller short tubes inserted.

Blowing into a bottle was insisted upon in every case, but not until the *unaffected side* had been carefully strapped with adhesive plaster in a manner similar to that used in the repair of fractured ribs, the object being to prevent emphysema of the well lung, if possible, and to hasten the expansion of the collapsed lung.

As soon as the patient was able to be up, light setting up drills and breathing exercise were instituted. Beds were moved out of the wards on to the porches, and food administered as frequently and in as great quantity as the patient could take it. Heroin, and occasionally morphin, were given during the first two or three days for pain or cough; threatened edema of the lungs was combated with digitalis, atropin and oxygen, and in the later stages, iron, usually in the form of the syrup of the iodide of iron was given.

RECORDED DATA

IV. *Results.*—There was a mortality of approximately 13 per cent. This included every case operated upon, regardless of post-mortem findings. No deaths occurred immediately after operation, two days to three weeks being the subsequent range of life in cases operated upon, depending upon the resulting complications.

New accumulations of pus, usually interlobar, were sought for and found by the use of the X-ray before using the needle in those cases which did not clear up under treatment, and secondary operations were sometimes necessary for their evacuation.

No case required extensive rib resection (Estlander Operation), decortication, or other pro-

cure for obliterating the chest cavity. Two-thirds of all the recovery cases were either in France with their regiments or temporarily in a convalescent hospital with the wounds healed, and at the time of my detachment from the Base Hospital there were none who were in a condition which would not admit of their early discharge to duty or to a convalescent hospital without further operation upon the chest.

Complications.—Infective arthritis occurred in a small number of cases. Pneumonia on the opposite side and occasionally empyema on the opposite side made serious, and in one or two instances, fatal complications. Endocarditis and myocarditis were rare occurrences.

Autopsies.—Until countermanded, autopsies were held on all patients who died after empyema. The results of these examinations were most illuminating and valuable. *In not one case could we ascribe the death to empyema.* It was invariably found that the drainage, so far as the part attacked was concerned, was satisfactory, but the cause of the death was a pyemia rather than an empyema. Broken down and suppurating bronchial and mediastinal glands, pus in the pericardium, pultaceous areas in the spleen, abscesses in the liver, multiple abscesses in the lungs, and free pus in the peritoneal cavity, gave evidence of the general rather than the local character of the condition. I was informed by a Chief of Service in one of the Cantonments, that these cases were not classified as deaths from empyema, but

rather from pyemia. If this be a proper disposition of them, then the mortality from simple cases of empyema was practically nil in the series of cases to which this paper refers.

REMARKS UPON OPERATIONS AND TREATMENT

The results of autopsy findings must be carefully considered before advocating any special line of treatment or operation. Following the great number of operations for empyema throughout the United States, a great array of opinions and operations were advocated and many claims for excellency presented which can scarcely be admitted in view of the fact that except under the most unfavorable circumstances and in the hands of the most inexperienced operator and of totally inadequate technique, deaths do not occur by reason of the method of operative procedure, but rather by reason of the inherent character of the pyemia, which precludes the possibility of efficient surgical intervention. This being the case, I do not present the method of operation outlined in this case as being superior to others, but in view of its low mortality, of the comfort of the patient, of its excellent permanent results, and of the cleanliness and absence of disagreeable odor in a ward full of these usually offensive smelling cases, I believe it to be worthy of consideration as a good method of operation.

OSBORN BLDG.

Caesarean Section; Its Indications and Technique*

Arthur J. Skeel, M. D., Cleveland

Editor's Note.—The main indications for Caesarean section in the experience of Dr. Skeel as well as others, are disproportion, placenta previa, eclampsia and other miscellaneous factors. Whether a given degree of disproportion is an indication for hysterotomy is a matter for the judgment and experience of the obstetrician to determine. Pediatricists emphasize the necessity of preventing mental deficiency due to injuries during delivery and in consequence narrow pelves have become an indication for Caesarean section. In Dr. Skeel's practice, in cases in which disproportion is suspected and the test of labor is to be given, all examinations are made per rectum until the time of final judgment when one thorough, rigidly aseptic vaginal examination is made, under anesthesia, if there be need of it. Caesarean section is justifiable for the sake of the child as well as in the interest of the mother in cases of complete placenta previa and a viable baby. Many considerations enter into the decision to employ Caesarean section for eclampsia, but when the operation is indicated hysterotomy is the procedure of choice.

IN the earlier history of obstetrics, Caesarean section was almost equivalent to a death sentence to the mother. The operation was performed only when the mother's life was beyond hope, and for the purpose of saving the child; or when the type of obstruction was such as to render delivery by embryotomy impossible through the parturient canal.

HISTORICAL EVOLUTION

With the introduction of asepsis, the maternal mortality of Caesarean section was so reduced (20-30 per cent.) that the operation was con-

sidered an alternative to embryotomy without, necessarily, sacrificing the life of the mother.

In those days Caesarean section for the absolute indication meant that delivery of the child, by embryotomy, was not possible, rendering the abdominal route absolutely imperative; or when delivery by embryotomy was possible, Caesarean section was rendered elective, because with it both lives concerned might be saved.

With the introduction of the Saenger technique of Caesarean section, the maternal mortality was still further reduced, and the operation was selected in behalf of the child in cases of moderate pelvic obstruction. Pelvic measurements, particularly the diagonal and true conjugate diam-

*Read before the American Association of Obstetricians and Gynecologists.

eters, were discussed in terms of half centimeters; and gradually the lesser grades of pelvic contraction were included within the limits indicative of elective Caesarean section.

Next came full recognition of the fact that most cases of fatal septic infection were caused by vaginal examinations and manipulations. This, with other refinements of technic, rubber gloves, and so forth, reduced the question of Caesarean section to two primary problems: (1). Can the child be safely delivered per vaginam? (2). What are the mother's chances to escape infection? At this period, the problem was, practically always, the amount of risk the mother should take to save a child whose life is endangered by some obstruction in the birth canal. This question is not always easily determined. The responsibility rests, principally, with the obstetrician. It is for him to answer this question in each case, with his own conscience as a mentor.

PERSONAL EXPERIENCES

Since January, 1914, the writer has personally performed fifty-three Caesarean sections in which the indications were as follows: Disproportion between the child and mother's pelvis, thirty-five; placenta previa, six; eclampsia, two; eclampsia and placenta previa, one; eclampsia and pelvic disproportion, four; and miscellaneous, five.

The indications here given correspond with those of other recent writers, showing disproportion as the indication in the majority of cases, sixty-six per cent.; placenta previa and eclampsia each approximately thirteen per cent.; and miscellaneous, eight per cent.

CAESAREAN SECTION FOR DISPROPORTION

The term disproportion implies simply that the passenger is too large for the passage. As the maternal and fetal mortality and morbidity of Caesarean section have been gradually lowered, the degree of disproportion justifying the operation has been considerably lessened. Whether a given degree of disproportion is an indication for hysterotomy is a matter for the judgment and experience of the obstetrician to determine. The latest broadening of our view in regard to narrow pelvis as an indication for Caesarean section was brought home to us by the pediatricist, who insists that many cases of mental deficiency are due to injury of the brain of the child during delivery.

To judge correctly, the obstetrician should consider carefully the size and shape of the pelvis; the size of the child; the degree of ossification of the head; primiparity and multiparity; an accurate history of previous labors; the patient's resistance, endurance, and muscle power. All of these must be carefully weighed before the obstetrician decides that disproportion exists in a given case. In addition to this, the presentation and position of the child, the character of available hospital facilities, and possibly a test of labor may have to be considered. If labor has

begun, the risk of an already existing infection, based upon the following, should be carefully considered before judgment is rendered for or against the election of Caesarean section in all cases of narrow pelvis: (a) the duration of labor; (b) the condition of the cervix; (c) the time elapsed since the membranes ruptured; (d) the character of examinations, or previous unsuccessful attempts at delivery, and when, where, and by whom they were made. The decision should not be left to the tyro, nor to the general surgeon, nor to the family physician.

The author is accustomed to designate the degree of descent of the presenting part by the term *station*. If the largest participating circumference of the presenting part is above the brim, it is called station 1; if it is in the brim, station 2; if it is below the brim, station 3. In a primipara with normal presentation and position, if the head is at station 1, at the beginning of labor, the accoucheur may suspect a small pelvis; if at the end of four or five hours of brisk first stage labor pains, the head remains at station 1, a narrow or justo minor pelvis is almost a certainty. In a multipara the head may remain at station 1, until the end of the first stage of labor, without any disproportion between the child and the pelvis whatever.

The bimanual examination, with attempted manual engagement of the presenting head, and the testing for over-lapping at the upper border of the pubes, gives valuable information to the expert obstetrician. Occipito-posterior positions render manual engagement more difficult, and presence of the projecting brow in these cases is often interpreted, by the inexperienced, as indicative of disproportion.

The most difficult of all cases to diagnose definitely as to whether the disproportion demands operative intervention, is that of the primiparous woman with a moderately contracted pelvis and a breech presentation, because no direct comparison can be made between the head and the pelvic brim. In these cases the type of pelvis is of assistance in forming an opinion. The justo minor type of pelvis is far less favorable for the delivery of the after-coming head than the simple flat variety.

In the writer's practice, in cases in which disproportion is suspected and the test of labor is to be given, all examinations are made per rectum until final judgment is to be rendered as to whether an operation is necessary; then one thorough, rigidly aseptic vaginal examination is made, under anesthesia, if there be need of it.

CAESAREAN SECTION FOR PLACENTA PREVIA

The series presents seven cases of hysterotomy for placenta previa. Six of these were of the complete type, central or nearly so. The operation was performed to save the life of the baby. All mothers recovered and all babies lived. The other case was complicated by eclampsia. She

was a primipara, thirty-six years of age, very desirous of having a baby. The family physician had taken care of her for six weeks, during which time she was suffering severely from toxemia. When she arrived near time, uterine hemorrhage began. The fetal heart could not be heard. An examination revealed a boggy mass, between the cervix and the presenting head, and extending over the entire vaginal vault. The cervix was unobliterated. Labor had not begun. The child was dead. Abdominal hysterotomy was selected as the safest method of delivery for the benefit of the mother. She recovered.

The writer believes that in cases of complete placenta previa and a viable baby, Caesarean section is justifiable for the sake of the child, as well as in the interest of the mother. If considerable bleeding has occurred, transfusion may precede, or accompany the operation. The use of the tampon and dilating bags, followed by version and slow extraction of the child, furnishes a high fetal mortality, and does not always save the mother. Caesarean section saves the child and reduces the maternal risk.

CAESAREAN SECTION FOR ECLAMPSIA

In the series of cases presented, there were seven abdominal hysterotomies performed for eclamptic toxemia. In only two of these cases was the eclampsia the sole indication for the operation. Four of the eclamptics were the victims of contracted pelvis; and one other was complicated by placenta previa.

If in a case of eclampsia it has been decided to empty the uterus before the method of procedure is determined, a study is made of, first, the condition of the cervix; second, of the size of the pelvis; and third, of the period of gestation, and the size of the fetus. The condition of the cervix is placed first, because it is of prime importance, for the reason that no case of eclampsia with an easily dilatable cervix should be subjected to abdominal section, unless it is complicated by some other bar to vaginal delivery. On the other hand, if a given case of eclampsia with a *long and rigid cervix* is to be delivered, it matters little whether the symptom, convulsions, has appeared or not, the abdominal route should be selected for the delivery of the child. Rest is a prime factor in the treatment of eclampsia, and the long painful hours of labor, necessary to deliver such a case, vaginally, will often prove fatal to the mother.

The writer lost a patient of this kind one year ago. She was a forty-two year old primipara, with a severe toxemia, a partially compensated heart lesion, and a long, hard, unobliterated cervix. The patient's brother, a physician, rather objected to Caesarean section, because no convulsions had occurred. Induction of labor was undertaken, convulsions began under the strain of a long first stage of labor, and the death of the woman was the result. I am sure this pa-

tient would have had a better chance for life had a prompt Caesarean section been performed under morphine and gas. The condition of the cervix is worthy of more consideration than the presence of convulsions, when we select the route of delivery in an eclamptic. In deciding whether to perform a Caesarean section for eclampsia with contracted pelvis, the obstetrician must again consider the maturity of the child. He must not lose sight of the fact that the child of a mother, long toxic, will be smaller than that of a normal mother at any given period of pregnancy.

TECHNIQUE

Forty-eight of the cases were operated upon in my home hospital where I have control of the technique. Five of them were in other hospitals where the technique was not amenable to my direction. There were no deaths and no infected incisions among the forty-eight cases in our own operating room. There was one maternal death and one sloughing wound among the five cases in other hospitals. Whether the difference was due entirely to faulty operating room technique is, of course, impossible to prove. There can be no doubt, however, that, in many small hospitals without a well organized surgical staff, the facilities are so poor that one must question his right to this uncertain factor. Even when one is operating in a well equipped but strange hospital, the old rule, "Every dog barks best on his own door step," applies particularly well here. Strange assistants, strange nurses, strange surroundings, all tend to produce a certain lack of unity of action, so that the operator can neither give, nor receive as effective service. This factor, too, should be given careful consideration in deciding for or against Caesarean section. The patient's chance for recovery is surely affected by it.

Our preference is to operate after labor has set in. The cervical dilation thus secured permits freer drainage, less operative pain, less vigorous uterine contraction, and less disturbance in the uterine wound. The abdomen is shaved, scrubbed with green soap and sterile water, dried, then washed with ninety-five per cent. alcohol, followed by Harrington's solution, and then again with alcohol. We employ either the high or medium incision. In the latter cases a mid-line incision, with the navel in its center, has been used. We do not know of any good surgical reason why the navel should constitute a landmark below which the incision should not extend. The umbilicus is usually excised to secure a more even suture line.

The classic extraperitoneal Caesarean section may have some advantages; but, judging from the literature, and the few cases the writer has seen, there is so much chance of tearing the peritoneum that it seems to offer little security against entering the peritoneal cavity.

The low transperitoneal Caesarean section operation, so much lauded as protecting the

peritoneal cavity by suturing, is a true intra-peritoneal operation so far as postoperative peritonitis is concerned.

Peritonitis following Caesarean section is acknowledged to be wound infection. On post mortem examination, and on opening the wound for drainage, the infection can be readily traced from the interior of the uterine cavity, through the incision, and along the suture lines.

Careful stitching of the abdominal to the uterine peritoneum; overlapping of the layers of peritoneum; the making of the abdominal incision and uterine incision at right angles to each other; all leave behind the same condition when the operation is completed; namely, incisions with suture lines at some place connecting the interior of the uterus with the peritoneal cavity.

The writer believes that the improved results from the low incision are due to the well known greater resistance of the pelvic peritoneum; and, as DeLee well states, to the lesser degree of disturbance from uterine contraction in the lower uterine segment.

The writer must protest against the argument that the low operation, requiring a greater degree of technical skill, is better because unskilled operators will be deterred from attempting it. We have not yet reached the point where we must camouflage an operation, making it appear more difficult, in order to prevent the tyro from performing this operation. Simple technique, where possible, is the best. In the future, we expect to do the median operation on clean cases, and the simple low operation on doubtful cases, or on cases where there is a suspicion of infection; but we do not expect to sew infection out of the peritoneum by any refinement of technique.

After the abdomen is opened, the hand is passed about the uterus to ascertain its freedom from pathological conditions, and its mid-line is drawn to the line of the abdominal incision. Wet towels are used instead of sponges to wall off the cavity. The uterine incision is made down to the membranes and enlarged with the scissors or fingers. The hand is used to separate the membranes freely before rupturing them. If the placenta is first encountered, it is quickly incised. The fetus is extracted and passed to an assistant after cutting the cord. Neither ergot nor pituitrin is given until the child is removed from the uterus, as we have several times experienced difficulty in extracting the head because of too early vigorous uterine contraction caused by these drugs. The fingers of an assistant, hooked in the upper angle of the uterine wound, make traction and even-uate the uterus immediately after the child is delivered. Pituitrin, 1 cc., is now given hypodermically directly into the uterine wall, and an ampoule of ergot is injected in the thigh. The placenta and membranes may now be rapidly stripped off, and easily lifted from the uterine cavity.

Two layers of continuous sutures of No. 2

chromic gut are used for the muscle wall of the interior. At each stroke the needle passes obliquely downward and inward. Although not locked, the sutures readily control bleeding. Care is taken to secure well the upper and lower angles of the uterine wound. The serous coat of the uterus is closed with plain catgut. The Lambert suture is employed for this purpose. This suture is made to include the superficial muscle fibres. The abdominal incision is closed as usual, with the addition of three stay sutures of silkworm gut.

To relieve pain, morphine is given freely during the first thirty-six hours. The child is usually admitted to the breast after twenty-four hours. Gastric dilatation is treated by pituitrin and lavage; simple intestinal distention is relieved by pituitrin and the insertion of the rectal tube. Gas-oxygen is our anesthetic of choice with some ether added if more complete relaxation is desired.

REPEATED CAESAREAN SECTION

When a patient has had one Caesarean section for disproportion between passage and passenger, the writer believes that the abdominal route should be chosen in subsequent deliveries. If the first Caesarean section was performed for any other reason except disproportion the woman should be taken to the hospital when near term, and kept under competent supervision; and there, the method of delivery may be selected as circumstances may indicate.

Repeated Caesarean section is by no means so simple an operation as the first one. As a rule, adhesions are found to exist. Of the six cases of the above series, numerous adhesions were present in five instances, and absent only in one. The densest adhesions consisting of omentum and gut, were invariably at the upper end of the abdominal scar. The abdominal incision, for the second Caesarean section operation, is best made lower down than the first, and to one side of it. The peritoneum should be opened first at the lower angle of the incision. In this manner, one usually enters the free peritoneal cavity at once, and adhesions may be dealt with advantageously. It has been the writer's practice to free the uterus thoroughly, but to leave adhesions to the abdominal wall alone, if they presented no special reason for interference.

In five of the six cases reported, the uterine scar was firm and discernible with difficulty; often it could be recognized only with a contraction. In one case the scar was thinned out in its lower portion and might have ruptured had the woman been allowed to deliver herself. The previous operation was performed by the writer, and with his usual technique. The puerperium was normal. She had been in labor for forty hours however, thus presenting one of the known causes for imperfect union of the uterine wall.

The uterus was not adherent to the abdominal scar in any of our cases.

Of the fifty-three cases of the above series, thirty-eight had been in labor less than ten hours; fifteen, longer than ten hours; six, twenty-four to forty hours; five were sent to the hospital by the family physician after prolonged labors; and, of course, numerous vaginal examinations. In some instances repeated attempts at delivery had been made; four cases had been tamponed at home to arrest bleeding; eight had been victims of decidedly poor management.

The single death recorded occurred in a patient with contracted pelvis. The membranes had

ruptured four days before I saw her; numerous vaginal examinations had been made, but no attempt at delivery. She lived fifty miles from my office, and the post-operative care was, necessarily, left to the family physician. He reported that the temperature began to rise on the second day; that eclamptic convulsions developed, and that she died on the fourth day after the operation.

All the babies lived, except in the two instances in which the fetus was known, or suspected, to be dead.

312 OSBORN BLDG.

Ophthalmic Case Record System

Bertha King Hobart, M. D., Toledo

Oculist, Dispensary of the Toledo District Nurse Association

Editor's Note.—While medicine is a profession its practice has a strictly business side and the case record and accounting system described by Dr. Hobart, while used in a specialty, is just as useful for and adaptable to the purposes and needs of the general practitioner. Those in the profession who keep their records and accounts in a business-like way are usually successful and they have a very potent influence in raising the economic standard of the practice of medicine as a whole, something that is not only desirable but very much needed. Admittedly the greatest philanthropists have been the greatest business men. A physician need not let altruism impoverish him. Nobody, not even his charity patients, will respect him the more for so doing. Why not see to it that at the end of 1921 you are on the right side of the ledger. Also your accumulated case records will, in themselves, be an education.

THERE are many methods of book-keeping and perhaps an equal number of case record systems, some worked out by individuals to suit their particular needs, and some devised by commercial concerns to sell; these, I do not wish to discuss in this paper, except to voice my approval of any thing that will render the desk-work in our offices less burdensome and make for greater efficiency.

The purpose, in mind, in presenting this paper is to bring forth the subject for discussion and to stimulate thought relative to modernizing clerical procedures in our special work. The system, which I am about to describe while not perfect, is, to my mind, so superior to many of those now in use by oculists that it seems worth while to present to your attention. It is hoped that some of the points may be helpful to practitioners of experience and also that the system, as it stands or with some modifications, may be of assistance to the ophthalmologist who is just entering practice.

It is not claimed that any particular point in the system offered is either original or especially new, but the combination is not, to my knowledge, in use by those who practice medicine. It may be added, here, that it is applicable not only to ophthalmology, but to any speciality. It is only dealt with from this viewpoint because my experience with it has been limited to that special line of practice.

EQUIPMENT AND SUPPLIES

The equipment and supplies consist of:

- I. Day Book
- II. Filing Cabinet
 - A. Index Cards
 - B. Alphabetic Guides
 - C. Case Record Forms
 - D. Folders.

I. Day Book.—This is of the regulation size and kind. It is used for entering the names of all patients at time of interview, together with the charges and the amount paid at that particular visit. The names are arranged in consecutive order, also the day of the month, the month, and the year.

This book is kept in a place convenient to both the physician and assistants. These entries give one the full idea of the day's business, the month's total, the year's average, and the number of patients cared for in any given time.

II. Filing Cabinet.—Without question the vertical filing cabinet and that made up of separate units, which will allow for addition, is the best on the market today. For the beginner a cabinet composed of two correspondence drawers and two 4x6 index drawers will be sufficient.

A. Index Cards.—The form used in my office is 4x6 in size and lined according to the Commercial Index ruling. Because of their permanent value and constant usage these cards should

be of the highest quality of linen stock. A word about handwritten cards; a non-copy, blue ink which turns black with age, and a coarse pen point, about number two will be found most satisfactory. These forms contain only the patient's name and file number and are filed in the direct alphabetic manner, each name under its proper letter and arranged in dictionary order, maintaining the sequence of letters to the last letter of the name.

B. Alphabetic Guides.—These are 4x6 in size, and contain eighty subdivisions of the alphabet.

C. Case Record Forms.—These forms are made in a size of $8\frac{1}{2} \times 11\frac{1}{4}$, with a special ruling which is continued on the back of the sheet. The lines in the body of the form are $\frac{3}{8}$ in. apart, the left margin is $1\frac{1}{4}$ inch, and at the right vertical ruling crosses the horizontal lines. The left margin is used for dates and such words as *fundus examination*, *treatment*, *prescription*, the notation varying with the case and the relative importance to later interest in these same particular phases of the case. The right double vertical column is for the accounting, the first column for the charge and the second for the amount paid. These forms are used without printing of any kind. On the upper right corner is placed the patient's file number which corresponds to the number in the card index and on the folder of this particular individual. The upper horizontal line contains, invariably the patient's name, age, sex, marital state, occupation, and in suitable cases the name of the employer. The date is entered in the left margin opposite the first upper line. The second line contains only the address. On the third line is recorded the name of the party who referred the patient. The fourth line is reserved for a later entry of the *diagnosis*, and for this red ink will be found very satisfactory. The remaining space is used for *history*, *information as to glasses worn*, *glasses prescribed*, *ophthalmoscopic and retinoscopic findings*, *treatment*, *notations as to accounts*, *et cetera*, and *future visits*.

D. Folders.—Their function is to hold case records, laboratory reports, perimetric charts, correspondence from and relating to the patient, carbon copies of letters to or about the patient, roentgenograms, in fact, all data bearing on the individual to whom the number on the folder is given. These envelopes should be of high grade manilla stock. The straight cut edge and correspondence size are the most practical.

The folders are numbered in the extreme upper left corner and are ranged in a correspondence size drawer of the vertical filing cabinet, in consecutive order. Guides are unnecessary.

SUMMARY

To summarize, hastily, let us say a new patient, John Smith, is presented for examination.

His name is entered in the day book. A case record form is attached to an ordinary chart file, which is supplied with a metal clip. The history, treatment, and other information, including the financial part is recorded. The latter, before filing of the record, should be copied into the day book opposite the name of the patient. He is then given the number following the last record filed, say 841, this then automatically becomes Mr. Smith's and is always identified with him in the desk work. All correspondence relating to him, laboratory findings, and all papers bearing on his case must carry this number. His name and number is also placed on his case record in the upper right corner, and also on his folder in the upper left corner. The case record is placed in its folder and filed away numerically. A few days later Mr. Smith reappears. We look in the alphabetic index in the 4x6 drawer under Sm and find him to be number eight hundred and forty one. Then we consult the numerals on the folders and locate 841 in which is all data relating to Mr. Smith.

OTHER CONSIDERATIONS

A weak point discovered early in the use of this system was the difficulty of ascertaining the unpaid accounts for which statements were to be rendered. This obstacle, we have overcome, simply, by attaching a small metal clip to the unpaid patient's card in the index drawer.

The office expenses are entered in the day book at the end of each month and the balance noted as the net income.

Indexing of Diagnoses.—This is a most valuable adjunct, and practically a necessity to one who is seriously practising ophthalmology. This, to my mind, can best be done by using a 4x6 index drawer in the regular filing cabinet and running the index alphabetically. For instance, Trachoma is filed under T and contains not the names of the trachomatous patients but their case numbers.

Transferring.—The question arises what is to be done when the first drawer is filled with case records and their folders. Real transferring is not necessary. The filled drawer is labeled on the outside showing the File Numbers it contains, which are, approximately, one to one thousand. This unit is left in its original position in the cabinet.

CONCLUSIONS

The case histories are in the most accessible form for studying, for reporting, and for purposes of literature.

This system of filing, that is, the running of card index by alphabet and the filing of subject matter by numerals is used largely in such businesses as newspaper morgues, insurance, and in many others, in which the filing is an immense

consideration and as such proves its practicality for the oculist, as his needs demand a method capable of easy expansion.

The economy in time and the general practicality of having all data pertaining to the pa-

tient in one place must be obvious.

Experts in the commercial world say "re-filing by numbers is the most accurate, most rapid and most easily comprehended system known."

304 PRODUCE EXCHANGE BLDG.

OHIO PUBLIC HEALTH NOTES

Following a survey made by the United States Public Health Service of the 444 largest cities of the country, an interesting report has been issued by the American Social Hygiene Association showing the ranking of these cities in the efficiency of measures taken to control venereal diseases.

Dayton with a score of 572, out of a possible 1,000 points, leads the cities of Ohio in the number and efficiency of the measures taken. Portsmouth with 527 is second, and Cincinnati with 526 is third. Cleveland made 476 points, Toledo 466, Lima, Akron 400, Alliance 396, Youngstown 369, Chillicothe 357, Columbus and Hamilton 344, Springfield 331. Towns making over 200 points are Canton, Lorain and Middletown. Mansfield scored 170, Sandusky 164, Norwood 160 and Marion and Lancaster 117.

The scores are based upon a possible 1,000 points, and the data obtained were in answer to questions regarding medical, legal, educational and general cooperative measures in force in these communities on February 1, 1920. The Public Health Service has announced that a similar survey will be made in the same cities early this year.

—A decision rendered by Judge J. H. Platt in the Seneca County Common Pleas Court recently held that the local health commissioner and the board of health were acting in good faith in prohibiting the attendance at school of children not meeting prescribed vaccination requirements, and refused a temporary injunction sought against the city boards of health and education. The judge refused to hear testimony in the case on the ground that it reverted to a dispute as to the value of internal or scarification vaccination by different medical schools.

—As one of the series of meetings that are being held by the Ohio Physical Directors' Society, physical directors of central Ohio met at the Columbus Y. M. C. A., January 4, for a conference on theory and practice of physical education. Dr. John Brown of New York, Y. M. C. A. international secretary of physical work, was the speaker of the occasion. Dr. Brown also spoke at a luncheon attended by 100 local business men on "The Significant Trend of Physical Education."

—Cuyahoga County health district, outside of Cleveland, will have a woman physician as medical inspector of schools and to establish six health centers in the county, according to an announcement made by Dr. Robert Lockhart, health commissioner. The health centers which will probably be located at Bedford, Chagrin Falls, Berea, West Park, Cleveland Heights and Brooklyn Heights, will be in charge of county nurses and will be visited regularly by physicians.

—Two new open window school rooms opened in Akron provide accommodations for 60 children. Of 239 children enrolled in open-window rooms in the city in the month of November, only 37 failed to gain weight, and these have physical defects which retard their development.

—Health Commissioner A. O. Peters of Dayton temporarily succeeded D. F. Garland as city welfare director, when the latter's resignation became effective January 1.

—Deaths in Toledo averaged ten per day during the year 1920. The year showed a total death toll of 3,417 against 3,202 in 1919, an increase of 215. Increases over 1919 were: eight from typhoid; 23 from measles; six from scarlet fever, four from whooping cough; 25 from diphtheria; 20 from cancer; 59 from apoplexy; 70 from pneumonia; 65 from heart disease, and 19 from summer complaint. There were 112 fewer deaths from influenza; 26 from tuberculosis; 18 by homicides and 15 by suicide.

—Dr. F. E. Hyer of Milledgeville has resigned as Fayette County health commissioner because of ill health. He has served since August, 1920, when he was chosen to fill the vacancy created by the death of Dr. A. O. Ervin, who had served since the office was established.

—A chemical research department is to form part of the equipment of Cleveland public schools this year. Tests will be made of air in all types of school buildings to determine the best system of ventilation to be adopted for the \$15,000,000 building program contemplated, and tests of the purity of water in school swimming pools will be made.

—Akron has a new health board consisting of three laymen and two physicians—Drs. J. G. Blower and W. S. Chase. The latter is the only member of the old board to hold over. The board is the first to be appointed under the provisions of the city's home rule charter, and considerable interest has been evinced in its personnel because of dissatisfaction recently expressed by the local medical profession with the management of the health department.

"Improperly Examined In School"

Members of the Cincinnati Health Board and its officials, including Health Commissioner W. H. Peters, Assistant Health Commissioner O. M. Craven and the mayor of the city, have been made defendants in an action for \$25,000 damages filed by a local resident on the ground that his twelve year old son was subjected improperly to a physical examination.

The petition states that the district physician at the school where the boy attends, under authority of the board of health, compelled him to submit to a physical examination and "publicly told the child, in the presence of eight other pupils," that he was suffering from "enlarged tonsils." It is alleged this was communicated to the father in an unsealed envelope, and that the child's name was published on a chart in the school as "an underweight," and that as a result of other pupils knowing these things the boy has been shunned by his former playmates and is humiliated by being dubbed "underweight" and denied the privilege of entering their games.

The plaintiff in this case recently figured in a controversy over the exclusion of his children from school because of failure to meet the board's rules concerning vaccination, which was finally settled through a decision rendered by the City Solicitor affirming the legal right of the health board to adopt a rule providing for compulsory vaccination and upholding the statutes providing for the cooperation of the school board with the board of health in preventing epidemics. The vaccination controversy does not enter the damage suit.

Clinical Conference of Surgeons

The Ohio state section of the American College of Surgeons will hold a two-day clinical meeting in Cleveland, April 1 and 2. Dates for the meeting and final arrangements were made recently by the state committee consisting of Drs. Charles Hamilton, Columbus; Walter H. Snyder, Toledo, and J. Edw. Pirrung, Cincinnati, in conference with Drs. George W. Crile and O. A. Weber, members of the local committee. The local committee on arrangements will also be supplemented by a representative from each of the Cleveland hospitals.

It is proposed to unite in attendance Fellows of the College, those accepted by the state credentials committee as eligible for membership, prominent surgeons and internists of the state and others working in group medicine or hospitals.

The program will include two public meetings, the object of which will be to inform the public in matters pertaining to hospitals, medical schools, public health, etc. There will also be two evening meetings addressed by surgeons of prominence, one of whom will probably be a well known foreigner.

The primary purpose of the meeting, which will

be an annual event hereafter, is to provide opportunity for the state Fellows to become better acquainted with the work of their neighbors, as well as to decentralize the great clinics of the North American Clinical Congress of the College which have been inaccessible to many because of distant meeting places.

New Books

Heart Affections; Their Recognition and Treatment. By Calvin S. Smith, M. S., M. D., Instructor in Medicine, University of Pennsylvania Graduate School of Medicine; Visiting Physician to the Philadelphia General Hospital; Visiting Physician for the Study of Cardiovascular Affections, Philadelphia Hospital for Contagious Diseases; formerly Instructor in Medicine, Jefferson Medical College; formerly Special Cardiovascular Examiner, United States Army. Illustrated. F. A. Davis Company, Publishers, Philadelphia, Pennsylvania. Price \$5.50 net.

The Practical Series, Vol. II, General Surgery, edited by Albert J. Ochsner, M. D., F. R. M. S., L. L. D., F. A. C. S., Price \$2.50. Vol. III, *The Eye, Nose and Throat*, edited by Casey A. Wood, C. M., M. D., D. C. L.; Albert H. Andrews, M. D., and George E. Shambaugh, M. D. Price \$1.75. Vol. IV. *Pediatrics*, edited by Isaac A. Abt, M. D., with collaboration of A. Levinson, M. D., *Orthopedic Surgery* edited by Edwin W. Ryerson, M. D., with the collaboration of Robert O. Ritter, M. D. Price \$1.75. Price of the series of eight volumes, \$12.00. The Year Book Publishers, 304 S. Dearborn St., Chicago, Ill.

Paracelsus, his personality and influence as physician, chemist and reformer, by John Maxson Stillman, professor of Chemistry Emeritus, Stanford University. The Open Court Publishing Company, Chicago. Price \$2.00.

Pulmonary Tuberculosis with Case Histories, by Edward O. Otis, A. B., M. D., Professor of Pulmonary Diseases and Climatology, Tufts College Medical School, Boston; Formerly Visiting and Consulting Physician to the Massachusetts State Sanatorium (Rutland); Fellow and Former President of the American Climatological and Clinical Association; Corresponding Member of the International Tuberculosis Institute; Consulting Physician to the Boston Dispensary, Tuberculosis Department; Major, M. R. C., U. S. A. Second Edition. W. M. Leonard, Publisher, Boston.

Hygiene of Communicable Diseases, a Handbook for Sanitarians, Medical Officers of the Army and Navy and General Practitioners, by Francis M. Munson, M. D., Lieutenant, Medical Corps, U. S. N., retired; Lecturer on Hygiene and Instructor in Military Surgery, School of Medicine, Georgetown University; formerly instructor in Medical Zoology, Georgetown College; late Brigade Surgeon and Provisional Brigade, U. S. Marines. Illustrated. Paul B. Hoeber, New York, Publisher. Price \$5.50.

County Secretaries in Session at Columbus Develop Important Suggestions for Organization Work

One of the most interesting meetings in recent State Association history, and one which bids fair to exercise far-reaching influence on the future welfare of the component societies, as well as the state organization, was held in Columbus, on the afternoon of January 2, when secretaries of the various societies met for a discussion of their mutual problems. The conference was called by the General Secretaries Committee, whose function is to assist and stimulate the work of the county secretaries. Eighteen secretaries were in attendance and the complete membership of Council of the State Association with one exception.

Dr. Wells Teachnor, president-elect of the State Association and chairman ex-officio of the General Secretaries Committee, presided. In his introductory address he explained that the conference was not an innovation, but the renewal of an important association activity. For many years the General Secretaries Committee held an annual conference with the county secretaries, and the January 2nd meeting was called at the request of the committee to revive this activity, with the thought that a discussion of mutual problems would give stimulus to the work of the new year. Briefly, he summarized the objects of the meeting as:

The encouragement of secretaries to more active work.

The comparison of obstacles occurring in the various counties detrimental to the interests of individual members of the profession and to the society as a whole.

The discussion of methods by which dissention within the ranks may be overcome to the betterment of all concerned.

Discussion of means of making the society more valuable to all its members by the adoption of a definite line of action.

Encouragement of acquaintance and contact between secretaries to promote the exchange of ideas for new activities.

Dr. Teachnor stressed the fact that the county society must be made a substantial superstructure for the building of state and national medical organizations. It is the bond of union between the counties which makes possible an effective and influential State Association; it is the unit of organization—the foundation and door to everything above it.

In order that the county society may be of maximum strength, Dr. Teachnor declared that it should include every physician in the community who is eligible to membership. However, he cautioned secretaries to beware of undesirables and said that in this connection a card index as part of the society records, showing the status of every physician within its jurisdiction, including

information on his educational qualifications, colleges, previous locations, character of practice, etc., would be of inestimable value. He questioned the advisability of accepting as associate members, dentists, veterinarians and members of other allied organizations, but said that occasional meetings held jointly with the dental societies would be found mutually helpful.

As the program for the meeting was designed to cover the most important details of the secretary's work rather thoroughly, Dr. Teachnor passed these by with the general observation that medical organization work must be done on a strictly business basis to be successful. He urged the holding of regular meetings, with snappy programs announced well in advance, and suggested that programs should not be confined exclusively to medical subjects, but should include discussions of social and economic problems.

Dr. Teachnor dwelled at length on the import-

Membership Facts

State Association paid-up membership on January 22 totaled 3,519, exceeding by 19 members the enrollment on a similar date last year. Seventeen counties were one hundred per cent. The final 1920 figure was 4,788.

ant place occupied by the secretary in the county organization. He admitted that the secretary's office is frequently looked upon as a thankless job, entailing endless work and no pay, but maintained that the physician who makes a first-rate secretary is the one who knows that his reward lies in the results of his efforts and he will not accept the office merely as a courtesy but will be willing to sacrifice time and effort. Among the qualifications of a good secretary, he declared the following most requisite: Enthusiasm, spirit of co-operation, perseverance, courage, promptness and accuracy. He said the secretary should also have a fund of information on various subjects if he would be of maximum assistance to his society. He should have a thorough knowledge of the constitution and by-laws of the State Association; be familiar with the history of medical organizations, and have a knowledge of the health laws and medical practice laws of the state.

As a conclusion to his address Dr. Teachnor reviewed the Association's accomplishments in membership enrollment and other lines during the past year, and declared that these constitute conclusive proof that most of the secretaries measure up to the standards enumerated.

Dr. James S. McClellan of Bellaire, was called upon to speak on "Fundamental Problems in Organization as Seen Through Twenty Years as

Secretary of a County Society," and responded with an inspiring talk that was rich in the helpful experiences of his long service and brimful of enthusiasm for the future. After announcing that he was the oldest secretary in captivity in his part of the country, Dr. McClellan humorously recounted how he had carried the books of the deceased secretary, who was his patient, to the next meeting of the Belmont County Society, which in a spirit of vengeance elected him to fill the vacancy and has ever since made him stick to the job. How well he has performed his task is too well known to require elaboration, and the high lights of his talk were much appreciated by other secretaries present.

Dr. McClellan said that he soon found that he could not get round and visit all the members of his society. So, he bought a typewriter and throughout the years it has been his custom to write many letters—personal letters containing all the warmth that ink can convey, in order to arouse the interest of the physicians in their profession and in other things. The secretary should be in personal touch or make a personal friend of every member of the society.

Dr. McClellan believes that doctors are just like other people and need a little social diversion occasionally. Therefore, when things slump in Belmont County, he gives a dinner for members of the society and their wives. This, he declares, "draws" better than any mustard plaster that can be made.

Cultivation of "key" men in the larger towns of the county is another of Dr. McClellan's "finds." Inasmuch as it is obviously impossible for the secretary to visit each town frequently, he depends on the leader or "key" man in each town to assist him in the secretarial work, such as collection of dues, etc.

One very excellent suggestion which he made was that the secretary counsel with the doctors about their libraries. He pointed out that many medical men, while they buy books now and then, mostly from agents who canvass, yet have no systematic way of building up their libraries. Dr. McClellan has found that nearly every physician is partial to some special phase of the practice of medicine, and if the secretary can interest him sufficiently to have him complete his library in some one line, he will awaken his interest in kindred lines. This, he holds, is the way to arouse men's minds in a broad way.

After his long period of service, Dr. McClellan maintains that the work does for the secretary a great service in return. It broadens his interest in men and affairs, but he must never be discouraged, always optimistic, and love the brethren and give himself freely to them.

Dr. James M. King of Wellsville, who is credited with doubling the membership of Columbiana County Medical Society during two terms as secretary, spoke on "Prompt Collection of Dues." Dr. King gave the following good rea-

sons why the prompt payment of dues is important:

1. It alone gives membership in the county, state and national medical societies, and secures to the individual all the benefits of such membership, including *The Journal*, medical defense, workmen's compensation bureau, etc.

2. In a large measure it demonstrates the degree of interest one has in his society and in his profession and proves his appreciation of organized medicine.

3. It may save possible embarrassment and worry to the association officers and headquarters and make the work easier than if a large number delay payment.

To bring about the prompt payment of dues, Dr. King declared that the secretary must have his society alive, with real red blood coursing through its veins twelve months in the year. The monthly or semi-monthly meetings must be full of interest and helpfulness, giving to the profession something worth while for the time spent in attendance. A dead society with few and irregular meetings paves the way for criticism; supplies fuel for the flame of opposition and strengthens the ground and premises of the habitual knocker, and lowers the vitality of the otherwise interested and active member. Dr. King never sends postal card notices of meetings; every notice is accompanied by a letter, and the telephone is used extensively.

He sends out his first notice or request for payment of dues in November, and in response between 20 and 25 per cent remit promptly. His second and stronger appeal goes out two or three weeks later and brings in another 20 per cent. The great problem is to collect the remaining 60 per cent. and these must be seen personally or called by phone, once, twice or sometimes three times. As an added stimulus toward prompt payment, Dr. King has found that it works well to arrange the very best meetings of the year in November and December.

Dr. Harry Rapp, live-wire secretary of Scioto County Society, enlightened the conference on "Other Activities Tending to Promote Harmonious Cooperation Between Members of the Local Society." Dr. Rapp declared that the big "feed" of the year, held by the Scioto County Society on the evening following the December meeting and the annual election of officers, ranks first among activities enhancing the good fellowship feeling. There are no post-prandial toasts of levity, but instead the balance of the evening is turned over to the guest of the evening, usually a physician from a nearby city who is winning distinction in his chosen field and who is known to the local society, for a lecture.

The retiring president presides at the dinner, which is financed from the local treasury, to which every member contributes when he pays his annual ten dollar membership fee. "Practically every member turns out, enjoys the eats, forgets if he ever had an enemy, dives into the discussion following the lecture and leaves feeling that he is just a bit wiser for having come and 'the

world is growing better' after all," says Dr. Rapp.

Once or twice during the summer months the Scioto County Society holds meetings which might be styled picnics, outings or family reunions, in the suburbs or nearby villages. On these occasions the families of members are guests, and the meetings have also been found helpful in stimulating the friendly spirit of the society. Scioto County further boasts that it is represented in athletics by a volley ball team in the professional and business men's league, thereby providing the doctor fans something to root for during the off season of baseball.

Dr. Rapp reported that his society enjoys pleasant relations with the Portsmouth Chamber of Commerce. Practically every physician is a member of that body and the society has a standing committee to represent it and confer with committees of the Chamber of Commerce on subjects pertaining to the public health and the medical profession. Through this relationship legislation has recently been passed by the city council for construction of an addition to the municipal hospital, that will further promote harmony among the physicians as well as serve as a work shop for their use.

Dr. Rapp suggested the holding of forum luncheons weekly, bi-weekly or monthly at some central location by local societies, especially those in which a majority of the membership are centrally located in a city or town. A light lunch and smoker, followed by an hour's "shop" talk, including case reports, newer medical developments or a resume of the late medical journals, would help the physicians to keep in touch and keep up, according to Dr. Rapp.

Dr. H. M. Platter, treasurer of the State Association and secretary of the State Board of Medical Registration, was the next speaker on the program and explained in an interesting and concise manner a number of sections in the Medical Practice Act which are frequently misunderstood by physicians. In speaking of the advertising section of the law, Dr. Platter called attention to the fact that there are two kinds of advertising—ethical and legal. Advertisements do not constitute ground for action by the board unless they contain "extravagantly worded statements intended, or having a tendency to deceive and defraud the public" or "where specific mention is made in such advertisements of tuberculosis, consumption, cancer, Bright's disease, kidney disease, diabetes, or of venereal diseases or diseases of the genito-urinary organs."

In a charge of having professional connection with, or lending one's name to an illegal practitioner of medicine, Dr. Platter declared the evidence was usually very clear.

Dr. Platter described the mesh of litigation in which the Talley Act had been involved during the past year and assured the secretaries that he was confident that the Supreme Court of Ohio

at a hearing set for February 13, would uphold the decision of the Court of Appeals confirming the constitutionality of the law. This will give the State Board of Medical Registration unquestioned right to go after both medical and non-medical violators of the Medical Practice Act, and Dr. Platter requested the society secretaries to assist in the house cleaning of Ohio for the benefit of public health by reporting irregular practices in their communities.

Dr. R. K. Updegraff, counselor of the Fifth District, told the secretaries of the progress of the Cleveland Academy of Medicine, under a plan of reorganization, which the academy instituted last year. Under this plan the academy employs a lay executive secretary, with newspaper and organization training, and the membership is subdivided into four groups—active, honorary, young men who have been out less than three years, and internes, with yearly dues ranging from \$40.00 to \$2.00. The plan was undertaken not so much for the benefit of the individual member, but to improve the status of the academy as a civic body. It has resulted in the establishment of fair representation in the local press, pleasant relations with the Chamber of Commerce, health department and other city agencies, which are convinced that physicians are anxious to be of service and are now consulting with them on health and welfare problems arising in the city. Dr. Updegraff decried the lack of facilities which frequently hampers the secretary in his work. He declared no county is too small to use the Cleveland plan and suggested the possibility of applying the plan to districts or groups of small counties.

Following the outlined program there was an interesting general discussion of the questions raised and a number of others. One secretary held that he could collect dues and formulate programs, but that he could not secure good attendance at meetings. Another secretary declared that he secured a fifty per cent attendance in a county similarly divided and having three large towns in which meetings are held, by announcing his programs in the papers and using the telephone freely in addition to the regular mail notices.

Dr. C. I. Kuntz of Fremont declared that the social element played a big part in getting out an average of fifty per cent. of the members in Sandusky County. Meetings are held at the homes of members and there are good eats and lively discussions. The programs include a great variety of topics and it is the policy of the officers to keep things moving. For instance, when the essayist failed to appear at a recent meeting and attendance was rather small, a committee was appointed to draft resolutions declaring that a member who was absent from three consecutive meetings would be considered not in good standing. The matter stirred up an argument that

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DEATHS IN OHIO

Frank Andrew Batten, M.D., Medical College of Ohio, Cincinnati, 1900; aged 46; former member of the Ohio State Medical Association; died, December 28, from complications resulting from an attack of influenza suffered several months prior. Dr. Batten's home was at Clarksville, Clinton county. He leaves his wife and one sister.

William Edmunds Kerr, M. D., Jefferson Medical College of Philadelphia, 1902; aged 43; died at his home in Steubenville, December 10, from pneumonia. Dr. Kerr was a resident of Steubenville for 17 years, but retired from practice some years ago because of ill health. His parents and one sister survive.

David W. Meredith, M. D., University of Wooster, Medical Department, Cleveland, 1871; aged 80; died at his home in Warsaw, December 13, from senility. Dr. Meredith's medical practice extended over a span of 50 years, 35 of which were spent in practice at Warsaw prior to his retirement three years ago. Surviving are his widow, one son and one daughter.

Francis B. Norton, M.D., Western Reserve University School of Medicine, Cleveland, 1875; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Cleveland, December 17, from heart disease. A practitioner of Cleveland for 47 years, Dr. Norton gave up private practice in 1886 to become police surgeon of the city and he resigned this post only sixteen days before his death. His widow survives.

John Thomas Shultz, M.D., Cincinnati College of Medicine and Surgery, 1876; aged 69; died at Ohio Valley Hospital, Steubenville, December 22, following a lengthy illness. Dr. Shultz had practiced at Kilgore, Germano, East Springfield and Detroit before entering the practice at Steubenville which he continued until the time of his last illness. He leaves his wife, one daughter and one son.

George Leander Starr, M.D., Bellevue Hospital Medical College, New York, 1865; aged 87; life member of the Ohio State Medical Association; died at his home in Hudson, December 20, after a two weeks' illness. Dr. Starr was a native of Hudson. Following completion of his medical studies he served as surgeon in the Army Hospital at Knoxville, Tennessee. He then located in Youngstown where he continued practice until 1880, when he returned to Hudson, retiring fifteen years later, when he met with an

accident which impaired his eyesight. In addition to his medical degree, Dr. Starr held A. B. and M. A. degree obtained from Western Reserve University in the years 1856 and 1859, respectively. He is said to have been the oldest alumnus of Western Reserve, graduating with the class of 1856 when Adelbert College was located in Hudson. His grandfather, Dr. Moses Thompson, was the first physician to settle in Hudson, coming from Goshen, Connecticut, in 1800, with David Hudson for whom the village was named. His widow and one sister survive.

Albert W. Thompson, M.D., Western Reserve University, Cleveland, 1874; aged 75; died at his home in Bristolville, Trumbull county, December 15, from cerebral hemorrhage.

Gustav Adolph Theiss, M. D., Western Reserve University School of Medicine, 1894; aged 40; member of the Ohio State Medical Association; died in an Akron hospital, January 8, from bullet wounds inflicted by a bandit who attacked him when he resisted robbery in his office.

Charles F. Dutton, M. D., Bellevue Hospital Medical College, New York, 1864; aged 90; died at his home in Cleveland, January 9. Dr. Dutton served in the Civil War as a surgeon in the 150 Ohio Volunteer Infantry. For seventeen years he was a member of the faculty in the Cleveland School of Physicians and Surgeons, later merged with Western Reserve University, retiring from that post in 1901 to resume general practice which he continued until 1910. He leaves one son.

Orlando C. Hook, M. D., Cincinnati College of Medicine and Surgery, 1875; aged 65; died at the home of his son in Seaman, Adams County, recently. Dr. Hook formerly made his home in Rainsboro.

A. G. Sellards, M. D., Miami Medical College, 1867; Jefferson Medical College, 1871; aged 82; died at the home of his son, Dr. H. C. Sellards, in Portsmouth, November 16, from septic infection of the gall bladder. Dr. Sellards practiced medicine in Portsmouth for about 30 years, retiring from active work two years ago. He was a veteran of the Civil War and one of the early pension examiners of Scioto county.

Victor B. Weller, M. D., Starling Medical College, Columbus, 1901; aged 43; former member of the Ohio State Medical Association and Fellow of the American Medical Association; died, January 12, near Pittsburgh. Dr. Weller's Ohio home was at Delaware, and he was enroute there from Washington, D. C., at the time of his death. During the World War he served an assignment of two years at Fort Oglethorpe, Georgia. He returned at the close of the war to resume civilian practice, but later re-entered service as an instructor in the Army Medical College at Washington, with the rank of captain. Dr. Weller was formerly secretary of the Delaware County Medi-

cal Society. He leaves his widow and two children.

William M. Calhoun, M. D., University of Wooster, Cleveland, 1877; aged 75; former member of the Ohio State Medical Association; died at his home in East Liverpool, November 20, from pneumonia. At one time Dr. Calhoun served as vice-president of the Columbiana County Medical Society.

Two Well-Known Ohioans Called

It sometimes happens that news of very general interest to the profession of the state arrives at *The Journal* office with only meager facts given, just as the pages are being closed, and that the full details follow too late for publication in the same issue. This occurred last month in the notices of the deaths of Drs. W. H. Buechner of Youngstown, and Harry H. Smith of Middletown, and occasion is therefore taken to add to the published obituaries.

DR. BUECHNER

Dr. William Herman Buechner at the age of 56 years succumbed to pneumonia, December 14, after a brief illness. A native of Youngstown who spent practically his entire life there except for college days and periods of study abroad, Dr. Buechner in thirty years' practice had established a splendid reputation as a consulting and operating surgeon. He was the son of the late Dr. William L. Buechner of Youngstown, and one of a long line of surgeons in his family to practice in the Western Reserve. As a boy of ten, Dr. Buechner started the study of medicine in his father's office, later graduating from Western Reserve University and engaging in post-graduate study in this country and abroad. His constant work drew upon his vital energy to such an extent that when suddenly stricken with pneumonia he fought a losing battle, in spite of the best efforts of the local profession and assistance summoned from New York and Cleveland.

Dr. Buechner's death brought grief to the entire city and many throughout the state and nation. No finer tributes have been paid to a member of the medical profession than those which appeared in the lay press after announcement of his death, as will be seen by the following excerpts:

"... The death of a man whose skill was always at the service of his fellow men, no matter what the emergency, is indeed an irreparable loss. We shall not feel, and shall not be, as safe, without him."

"Never before in the history of the city was there more concern; more deep seated sorrow over the passing of a man. It seemed as though each and every person considered his passing a personal loss. It was a public grief. Bankers and manufacturers and men of note have passed away with the sincere sorrow of the people. This time it was something more."

"The man who died last night was something more than a public character, separate and apart in his circles of friends and associates. He was the property of the public which he served long and well and willingly."

"To the people to whom he had given the best

of his skill and strength and life, he was closely bound and intimate. His knife and his steeled courage and his trusty hand had saved and succored thousands from lives of misery or from death. . . .

"Dr. Buechner was candor and honesty in all his dealings. He abhorred chicanery in his profession and in life in general, and said so. He was not an operating surgeon for love of it, nor for pay. He operated when he felt it was his duty and the patient needed it."

"In the death of Dr. William H. Buechner not merely are his friends the losers. All Youngstown must have heard the news with a pang of deep regret for his loss is a city loss. Son of one of Youngstown's earliest and most beloved men of medicine, Dr. Buechner was born to the calling that he followed here for a third of a century. While known personally to a great many Youngstowners he was known professionally to perhaps every person in the city. His skill as a surgeon was traditional and his ability never exaggerated, for praise came from others and not from himself. No one ever heard Dr. Buechner boast of his professional knowledge. It can be said with equal truth that no one ever heard him mention the countless acts of professional charity he did in life. Few, in fact, realize the work he did in this respect for it was done unostentatiously. Good surgeon, good citizen, lover of clean sports, friend to his fellow man—Dr. Buechner occupied a most useful position."

And the following expression from the Rotary Club with which he was affiliated in addition to many other organizations of professional and social nature, speaks eloquently of the esteem in which he was held:

"Our friend and fellow Rotarian is dead. The pleading prayers of thousands, many of whose lives he had saved, were unavailing."

"The most skillful physicians were powerless. All that love and wealth and science could do was futile before the night that dread conquerer—Death. And it was the sad irony of Fate that the great physician and surgeon, who had so often rescued others from the clutching hands of Death, could not withstand the attack of that cruel monster against his own life's citadel."

"'He saved others, himself he could not save.' How poor and futile and helpless are we all in the presence of Death. 'Tis then we feel with the poet—'Oh, why should the spirit of Mortal be proud. Like a swift fleeting meteor, a fast flying cloud. 'Tis a stroke of the lightning, a break of the wave, man passes from life to his rest in the grave.' Our friend was stricken just as his great ability was approaching its zenith."

"In his chosen profession his preeminence was so universally acknowledged, that he was beyond the realm of rivalry or jealousy or envy. But his acknowledged supremacy in his profession, the admiration and praise and gratitude of his patients, left him unspoiled. He ever remained the modest, courteous, unassuming gentleman. Always considerate of the feelings of others, he devoted his life to their service, and exemplified to the utmost the cardinal principle of Rotary—service."

"Although wealthy, and probably possessed of a greater ability to earn money than any other man in this community he cared nothing for the trappings and living of wealth, and despised its vulgar and ostentatious display. The crippled street Arab received the benefit of his great surgical skill, as fully and completely as the child of wealth. He had so often seen all social ranks leveled and all distinctions of wealth and power

wiped out by the shadow of Death, that he recognized in its fullest sense the common brotherhood of man. His life was devoid of sham or hypocrisy or pretense. He did not profess—he practiced christianity, and like the Man of Gallilee, he went about among his fellow men doing good. He believed with the poet—“On forms of faith let senseless zealots fight. His can't be wrong whose life is in the right.” . . .”

DR. SMITH

Dr. H. H. Smith, chief surgeon of the American Rolling Mill Company, Middletown, Ohio, passed away at the Methodist Hospital, Indianapolis, Indiana, November 22, of general septicemia. Dr. Smith was born in Kokomo, Indiana, on June 6, 1872. He graduated in medicine from Indiana University in 1907.

Dr. Smith was one of the outstanding figures in industrial medicine in the United States. He did not take up the study of medicine until he was thirty years of age, having spent his earlier manhood in teaching school and other work along educational lines. It was his conviction from the very start that preventive medicine was the great hope of the world and he saw that the place to work out his theory was within institutions where large numbers of people could be dealt with as a unit.

After serving as an interne in the Deaconess Hospital at Indianapolis, Indiana, his first position as a physician was in the State Reformatory at Jeffersonville, Indiana. Here he had his first opportunity to develop plans for institutional work along medical lines. In 1911, Dr. Smith superintended the plans for a new hospital for the American Rolling Mill Company of Middletown, Ohio, and became its physician. For the first five years he was the only physician in charge. Later the medical organization grew until at the time of his death it numbered three physicians and thirteen nurses.

The hospital is modern in every respect, containing X-ray machines, laboratory equipment, fully equipped operating room, motor ambulance service, physical examination department, and medical clinic. The division of the work is divided between the main hospital, the shop dispensary, which is located in the center of the plant, the colored hospital, with ten or twelve beds, the central works hospital, and a physician's office and special treatment room in the main office building.

Dr. Smith's warm personality helped him to win the hearts and confidence of those he served. He early realized that the success of industrial medicine was largely a matter of building up confidence between the organization and the medical department and success of his efforts in Middletown was in a large measure due to the way in which he succeeded along these lines. His door was always open, he stood ready to answer every call in the name of the institution he loved and which stood back of him in working out his dream of helpfulness.

Boards of Education Not Liable for Medical Bills

Attorney General Price has ruled that there is no legal authority for a board of education to pay a physician's bill for services rendered to a pupil who is accidentally injured in school. The decision was rendered at the request of the state superintendent of public instruction.

It cites the fundamental fact that a board of education cannot properly expend the funds entrusted to it except in pursuance to law. Cases are cited showing that it is a well established rule of law that an agency of the government, which might be a board of education, is not liable in its corporate capacity for damages resulting from its negligence in the absence of a statute fixing such liability. In view of these the opinion states that it would be “difficult to conceive of any case in which the board would be liable in case of an accident resulting in an injury to a pupil.

“It is elementary that those transacting business with a board of education are bound to know the extent of its powers, and regardless of what action the board might take relative to employing a physician to attend an accidental case there would be no legal liability incurred. . . . A board of education can only enter into such contracts and make such expenditures as it is authorized to make under the law.”

Sixth Councilor Meeting

The Union Medical Association of the Sixth Councilor District will meet in the Peoples Hospital, Akron, February 8, for its annual session. Dr. Malcolm S. Woodbury, superintendent of Clifton Springs Sanitarium, was to have delivered an address, but owing to a severe attack of pneumonia he will not be able to come. The secretary, Dr. J. H. Seiler, is negotiating with the Mayo Clinic for a man to take his place. Among the other papers will be “Goiter Diagnosis” by Dr. Armin Elsaesser, Youngstown; “The Surgical Principles in the Treatment of Pneumonia,” by Dr. John P. DeWitt, Canton; “Hare-Lip and Cleft Palate,” (with illustrations), by Dr. C. M. Clark, Akron; “Tumors of the Neck,” by Dr. C. A. Hamann, Cleveland. Should Dr. W. S. Lebman of Wooster still be in this country he will tell us of his experience with Elephantiasis in West Africa.

The Summit County Medical Society will entertain visiting members at noon-day lunch.

Periscoping the Legislature As It Sets Sail for a New Session

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and Legislation was requested to maintain a neutral attitude at least until the results of the survey are forthcoming.

Hospital Licensing

Following the provision for a bureau of hospitals in the State Department of Health it has been understood for some time that an effort would be made to pass a bill providing for the licensing of private hospitals, based on the registration and standardization in the bureau of hospitals.

It is said that a bill may be introduced empowering the bureau of hospitals in the State Department of Health to determine a recognized course of training in anesthesia, and to include such training in hospitals recognized as being able to give proper courses in their regular nurse training schools.

Nurse Legislation

It will be remembered that during the last session of the Legislature two bills were introduced (House Bill No. 353 and House Bill No. 412) by Dr. Helfrich to establish standards and courses of training for "nurse attendants." On account of the difference of opinion on those bills neither one of them was passed. Since that time an effort has been made to get the various groups interested in the proposition to agree on a proposal which is expected to provide for "nurse attendants" who shall not be trained in the same schools with the prospective registered nurses and who will not be permitted many of the powers, privileges and prerogatives enjoyed by registered nurses.

State Department of Welfare

It is understood that the Joint Legislative Committee on Administrative Reorganization favors the consolidation of the functions now performed by the Board of Administration, the Board of State Charities and the Commission for the Blind, under a department of welfare to be headed by a commissioner of welfare and under whom will be sub-commissioners as heads of various departments. For example, it is expected that instead of there being a physician, as at present, a member of the State Board of Administration, there will be a physician as head of a bureau in the department of welfare to supervise the medical administration in state institutions.

Hughes-Griswold Health Code

Some of the opponents to the present law ex-

pect to insist on the repeal of the Hughes-Griswold health code although this opposition at the present time does not appear to be formidable. It is sufficiently strong, however, to prevent a strengthening or extension of powers vested in the State Department of Health at this time.

Commission for the Handicapped

Acting under the federal provisions for vocational training, a director of vocational training or director of vocational education has been appointed for Ohio, who is at present endeavoring to secure support for the passage of a bill to procure funds from the state treasury in order to secure an equal sum from the federal subsidy for the vocational training of industrial cripples, and to be extended to all handicapped. Such a proposal is now in the course of preparation but its provisions and the outcome of its introduction will depend very largely on general plans for reorganization such as the formation of a department of welfare above explained.

Crippled Children

It will be remembered that Council during the last annual meeting authorized the appointment by the president of a committee on crippled children which has been in cooperation with a number of other groups and agencies. In view of the uncertainty of other similar proposals and in view of the conflicting ideas of various agencies interested in this work no bill has yet been drafted, although a tentative agreement on certain proposals has been arrived at, such as the desirability of a bureau of orthopedics as part of the State Department of Health, largely for the purpose of education or as a measure of practical prevention as applied to disabilities which tend to become chronic or permanent.

On account of the expense which would be involved and the unlikelihood of securing large state appropriations it is expected that most of the effort will be directed toward the development of non-institutional work in the care, treatment or education. The tentative proposal also provides for the appointment of a supervisor of education for the handicapped as a part of the State Department of Public Instruction, with supervision over state institutions and public schools for the blind, deaf and crippled.

These suggestions, however, are also contingent on the above proposals for a commission for the handicapped or the state department of welfare. While something will probably be done by the legislature looking toward greater state supervision over the handicapped, any such proposal carries the danger of one more step in socialization or state medicine, and while undoubtedly

something of the sort will be done it behooves those affected to consider the probable result of these measures.

Physical Education

Pursuant to the appointment of a committee of the State Association on physical education steps have been taken in conjunction with other agencies for the formation of a proposal providing for a supervisor of physical instruction in the State Department of Public Instruction. The proposal may also provide a certain amount of state aid in securing educational directors holding special certificates in this kind of work.

Industrial Commission

The insurance interests and others appear to be rather strongly organized with the apparent intention of modifying the workmen's compensation law, either to eliminate the Industrial Commission's supervision over those industries which carry their own insurance under Section 22 of the Workmen's Compensation Act, or to permit re-insurance by industries for losses in excess of those allowed in the state law.

Workmen's Compensation Law—Increased Compensation

Organized labor is planning to request an amendment to the Workmen's Compensation Law providing for increased payment to injured workmen beneficiaries under the act. Another proposal is for an increase in compensation to employes of the Industrial Commission. The Policy Committee and the Council would be particularly interested in more adequate compensation for the chief and assistants in the Medical Department of the Industrial Commission, as previously recommended and as contemplated in a resolution adopted by the House of Delegates at the last annual meeting.

Organized labor hopes to extend the Workmen's Compensation Law to include all employers who employ even "one or more" persons; as well as an increase in weekly compensation for those who are disabled. Labor's program also contemplates the establishment of a mining department separate from the State Industrial Commission.

Occupational Diseases

A bill similar to House Bill 441, introduced in the last session but never brought to a vote, will be introduced to include occupational diseases under the Workmen's Compensation Act. Such diseases, so defined in that law, were anilin poisoning, anthrax, arsenic poisoning, brass poisoning, carbon monoxide poisoning, benzene (gasoline) poisoning, benzol poisoning, bi-sulphide of carbon poisoning, compressed air illness, dinitrobenzene poisoning, glanders, lead poison-

ing, mercury poisoning, naphtha poisoning, natural gas poisoning, phosphorus poisoning, turpentine poisoning and wood alcohol poisoning, and other diseases contemplated in the new safety code being drawn up by the Industrial Commission.

The proposal to include occupational diseases under the Workmen's Compensation Act had the indorsement of both political parties in their state platform and is being demanded by organized labor. This was also advocated by Governor Davis in his inaugural address Jan. 10.

Old Age Pensions

Organized labor and other agencies are demanding the creation of a state pension commission, under which shall be constituted county boards of welfare for the administration of an act providing pensions for aged and infirm citizens of Ohio. This proposal is similar in many respects to House Bill No. 361 introduced last session.

Eight-Hour Legislation

Organized labor is also asking for legislation limiting to eight hours daily employment in continuous industry. As a brother or sister bill is a proposal to limit to eight hours per day the employment of women.

Dental Hygiene

Similar in some respects to some of the nurse proposals is the request by members of the State Dental Society for the authorization of "dental hygienists" through legislation requiring girls and women to obtain a license from the State Board of Dental Examiners and to practice under the direction of a legally licensed dentist, and who, as a preliminary requirement should take a course of schooling of no less than one year of eight months in a "school of dental hygiene," preferably connected with dental colleges.

Medical College Hospital

As one of the features in the request by the state universities and colleges for a joint appropriation of four million dollars is understood to be the item for a substantial appropriation for a hospital for teaching and charity purposes connected with the medical college of Ohio State University. This would be similar to the proposals contained in House Bill No. 476, introduced last session but not brought to a vote, providing for the construction of a hospital for such purposes at the state university.

Municipal Water Supplies

Growing out of the great loss of the Salem, Ohio, typhoid epidemic proposals are expected to be introduced at the request of the State Department of Health providing for periodic bacterio-

logical examination of municipal water supplies and for the prevention of use of water by municipalities from questionable sources.

Prohibition

The Anti-Saloon League has a proposal making it impossible for druggists to dispense whiskey even on physicians' prescriptions. There is also a prohibition bill providing for the establishment of enforcement machinery as a part of the state government.

Maternity Benefits

With the probability that Congress may reject the Sheppard-Towner maternity bill which would require an annual expenditure of \$4,000,000 by the federal government alone, in the work, it is expected that its proponents will center their efforts toward state legislation of a similar purpose.

In a statement published in "*The Woman Patriot*," Miss Mary G. Kilbreth charges that the effect of the bill, if enacted into law, will be to send throughout the country an army of amateur advisors and political investigators to invade private homes.

"These amateurs," she asserts, "are to 'investigate' maternity as a political business under the pretense that political doctors are better than family doctors and political committees better than trained nurses. It is part of the feminist program to 'make motherhood a government institution.'"

Miscellaneous

Many other proposals are to be introduced, including a school law for compulsory school attendance between the ages of six and eighteen years, unless for the purpose of employment permits be issued by the school authorities, supplemented by certificates of physical fitness issued by school physicians or health commissioners, or upon certificate of physicians approved by such official health authorities.

Other proposals include the extension of state institutions for defectives, modifications permitting county combinations in maintenance of tuberculosis hospitals, and new procedure in the adoption of children; and still other proposals would be based on federal legislation so as to take advantage of the federal state-aid principle referred to editorially in the January *Journal*.

Experienced Legislative Committeeman Emphasizes Value of Co-operative Effort in Maintaining High Standards

After reading an exposition of pending and probable legislative issues such as you have found in this issue, a bit of advice from an experienced legislative committeeman is *appropos*. Dr. Gainer Jennings of West Milton, Ohio, is an example of a live-wire committeeman. The message which he took to a joint meeting of the Miami and Shelby County Medical Societies recently is one which every society in the state could hear with benefit. It is essentially a plea to the medical profession to better inform itself on matters affecting public health and the practice of medicine, and fortified with this information to cooperate to the fullest extent in preserving high standards in health protection against the attacks of the unqualified and unscrupulous. Dr. Jennings' talk is here reproduced in part:

Man is a lazy animal. Most doctors are men—the women doctors are in another class. Fifty years ago P. T. Barnum said that there were forty million people in this country, mostly fools. Many a truthful word is spoken in jest. Most of us are fools because we are too lazy to read and think. We cannot thing without data. And we must be sure of our facts, if we hope to avoid a lot of wrong thinking. Thomas Carlyle, in his seldom-read "*Reminiscences of My Irish Journey*," written seventy-five years ago, referring to the incident of a native maliciously directing him to take a wrong and very bad road, thus philosophized: "If the devil were passing through my country, and he applied to me for instruction,

or any truth, or fact, of this universe, I should wish to give it to him. He is less a devil, knowing that three and three are six, than if he didn't know it; a light spark though of the faintest is in this fact; if he knew *facts enough*, continuous light would dawn on him, he would (to his amazement) understand what this universe *is*, on what principles it conducts itself, and would *cease* to be a devil." The good Book admonishes us: "Ye shall know the truth and the truth shall make you free." And "Prove all things; hold fast to that which is true."

From its first issue, month after month, *The Ohio State Medical Journal* has been placing before us "the truth, the whole truth and nothing but the truth," for our protection, for our edification and for our instruction. But the facts printed can do us no good until we get them into our heads, and then out into our acts. Many of us are too indolent to make the effort necessary to digest and absorb these facts; without such knowledge there can be no intelligent action. Knowledge is power; lack of knowledge is weakness. Truth is of no value unless it is exemplified in conduct.

The article by Dr. Frederick R. Green, published in the December *Journal*, is a most complete analysis of state medicine or health insurance. Have we read this timely and scholarly monograph with the critical care its merits so richly deserve? It should be studiously read again and again by every physician in the state.

Then it should be read and openly discussed by every county society. We will likely all agree with Dr. Green's fundamental conclusions—except his denial that health insurance is inevitable. It will become inevitable unless appropriate action be taken immediately to meet the problem squarely. The physicians *could* prevent compulsory state health insurance *if* they will realize their power and at once organize to exert it. Our executive secretary, Don K. Martin, with the help of the good, bad and indifferent legislative committeemen, cannot turn the trick unaided. It will require the prompt and active assistance of every county society in the state, with the earnest and zealous cooperation of every individual member. We must educate along these lines or perish. One of the secrets of the power of old Greece lay in close association of a limited number of people. Unless the members of our county societies promptly organize a similar "close association" we will not have the power to defeat this iniquity.

At present, only a few of the labor organizations are demanding that free medical service be furnished by the state. The American Federation of Labor, at this time, is opposed to compulsory health insurance, and so are other labor organizations, national as well as local. Those who are on record for it, are not so much the labor organizations themselves, as the various *social reform associations*, among which the American Association for labor legislation, is the foremost. They have devised a standard bill for health insurance; they were behind the movement for workmen's compensation, and *now* for health insurance.

Those among the leaders of labor organizations, who are favoring compulsory health insurance, ought to make it clear to the rank and file, that the practice of medicine, in the proper way, must needs be expensive; and that they must not expect to receive adequate medical service, unless they are prepared to dispense with a much larger percentage of wages, than they are made to believe would be adequate, for procuring the desired service. They also ought to realize that mere legislative enactments, without the hearty cooperation of the medical profession, and without adequate provisions for the scientific practice of medicine (in the way of additional hospitals, sanatoria, laboratories, and so on, not only in the large cities, but in the country districts as well) are not going to bring about the amelioration of conditions which the legislation intends to bring about.

Social reform associations are demanding that the state furnish free medical and surgical services to all employes in the state. House Bill 517 introduced before the last Ohio Legislature says, that the word "employee" includes foremen, but does not include "officers, agricultural laborers and domestic servants." Why exclude the comparatively few "agricultural laborers and

domestic servants?" Are they not entitled to free doctoring and medicine? Do not let your soul be troubled—they will soon be cared for in an early amendment.

This is the entering wedge. Social reform organizations are close associations of individuals who know exactly what they want and exactly how to get it. In this instance, they *will* get it, if medical men do not at once begin to think and act as a unit in disclosing the many fallacies on which this demand is based. Doctor Green has given us arguments, which, if effectively used, may prevent the wedge from entering, but we cannot effectively use this argument without efficient organization. It will be fatal to "let George do it," unless each and every member of our society has thoroughly studied the whole subject until he is able and anxious to *help* George do it. The name "George" is used as a short form for the long term of "county auxiliary legislative committeeman."

In the present crisis, no individual physician can safely longer delegate *the work he should personally* do, to any official of the county, state or national association. The time is *here and now* when every physician must act well his part, if he does not want to see his profession discredited and made the plaything of scheming politicians.

We are living in a socialistic age. Paternalism is now rampant. No matter whether the awful world war, or something else, has brought this about, the fact remains—it is here now. In the oft-quoted language of Grover Cleveland, "a condition and not a theory confronts us." Are we, ostrich-like, going to stick our heads into the sand of sloth and ignorance and say that there is no danger? Or are we going to arm ourselves with every available fact, don the armor of truth and right and go forth to battle for the best interests of our noble profession, which has always and everywhere made the welfare of suffering humanity paramount to every other consideration? Unless we all fully realize that we are in a life and death struggle for our profession, and each one of us determines to do everything in his power to help the cause of right, of humanity, and of home, health insurance will soon be upon our statute books and medical practice will be so lowered that eventually it will be impossible to practice medicine honestly and live. We must effect as nearly perfect an organization as possible in every county in the state or perish as physicians. These are strong words, but the occasion merits even stronger words, could they be commanded.

We will agree with Dr. Green that workmen's compensation and so-called health insurance have nothing in common. But the social reform organizations point with pride to the workmen's compensation laws and loudly and persistently insist that social insurance is logically the next step. This is in keeping with most other fallacious arguments. Twenty-three hundred years ago Plato

said that "A false statement, if repeated often enough and with sufficient emphasis, is generally harder to disprove than to establish what is actually the truth."

So, if as physicians, as well as citizens, we undertake to disprove the falsehoods and to establish the truths involved in this controversy, we must be alert and unceasing in our efforts. Doctor Green wisely advises us to stress our citizenship rather than our profession in our arguments in this conflict. There can be no help for us if we do not at once get together and intelligently act and talk as a unit.

The medical profession should take greater interest in legislative movements, so as not to be caught unawares. However, the inattention displayed toward pending state legislation does not obtain solely in Ohio. When the bill for licensing chiropractors in the state of New York came before the New York legislature this year, no representative of the medical profession was present at the hearing, with the single exception of the Health Department. The bill passed both houses, because the legislators could not conceive of any opposition to the bill, when at the public hearing no medical organization was represented. It was only when the bill passed, and came to a hearing before the governor, that medical men roused up and expressed opposition, and then the governor vetoed the bill.

Physicians must constantly engage in a more intensive campaign to educate the laity in public health matters, so that public opinion may prevent the passage of any faddist legislation. A campaign of this kind defeated the efforts of chiropractors, and those who oppose compulsory vaccination and animal experimentation, to obtain desired legislation, by an overwhelming referendum vote last fall in California.

Heed the advice of Dr. George W. Whiteside: "The majority of legislative activities affecting the medical profession, and to which they are opposed, are made possible by the people's ignorance of the essential truths of medical science, and of the work being done by the profession. Bring them to a realization of these things, and the voice of the profession, in legislative halls, in purely medical matters, will be as potent and acceptable as it is in the homes of those distressed by sickness. The advice and counsel you are *paid* to give the sick, is followed with faith, and confidence in your honesty and ability. Why should it not be so in the halls where laws are made? Awaken *that* confidence in your legislative wisdom on medical matters, that *now* is reposed in your medical skill and your voice *will be heard* and *heeded*."

In the multitude of counsel there is wisdom. We must first get together in our county societies and thresh out any differences of opinion regarding pending legislation until each and every member is at all times ready to do his full part.

As a basis to exert influence in the near future

every physician in the state should, by all means, at once cultivate as close a personal acquaintance as possible with his state senator and representative. This should be done with tact and persistence. The physician unwilling thus to sacrifice a little of his time and convenience in this hour when the welfare of his profession hangs in balance is unworthy of the high calling which he professes. George Sheridan knew what he was talking about when he said in the July, 1919, *Journal* that "Probably not until state health insurance is adopted, will your county and state medical associations mean much to most of you; but, from the day health insurance is inaugurated in this state, the maintenance of decent standards in medical practice will depend upon the ability of the physicians to *pool their resources* in a single workable organization."

"Thus they may exert their maximum strength in standing for their rights, and in opposing two giant forces which will crush honest medical practice if the rights of practitioners are not protected.

"The reason for this positive statement is apparent. Under any form of state insurance, capital, as represented by the employer will be chiefly interested in keeping the insurance cost as low as possible. Labor, seeing an opportunity to get something for little or nothing, will demand the maximum of medical benefits. As a result the physician who is a third vital factor in the scheme will be caught between the devil and the deep blue sea.

"If the physicians of Ohio refuse to recognize the fact that their sole strength lies in organization, and attempt to meet this big new thing on an individualistic and bull-headed basis, a most unpleasant time will be had by all."

Thanks largely to George V. Sheridan, Ohio probably has a better organization than that of any other state—but it is yet far from perfect. Its weakness is due to the apathy of the underlying county societies. The county society must work through and in complete harmony with the state medical association. In no other way will we be able successfully to deal with the serious problems now confronting us. We must get rid of all hindrances to clear thought and effective action.

Shall we wait until our Ford is stolen before we think of locking our garage door? Now is the time to look well to the security and perfection of our county society.

As Ben Franklin said at the accouchement of our country, "We must hang together or be hung separately." Let each of us determinately promise in the words of Shakespeare, "If it be a man's work, I will do it."

OHIO HOSPITAL NOTES

Ground for the new \$4,000,000 Cleveland city hospital was broken on January 8. The institution will consist of a group of five buildings and annex and will have accommodations for 1,200 patients. It is the intention to push with all possible speed the construction of the principal buildings of the group, namely, one for general hospital purposes which will house approximately 700 patients; an extension to the contagious hospital accommodating 100 additional patients, and a modern psychopathic ward building with a capacity of 150.

One of the most important and striking features of plans for the new group is found in a ward building of an extremely flexible type, so designed as to be able to satisfy pressure upon any clinical department of the hospital. Instead of providing a number of isolated buildings, the architects have combined in a single building eighteen ward units so arranged, so subdivided, and so related to each other that one or more ward units or parts of units can be assigned to given clinical departments in the most flexible way.

More than half of the total number of beds in any ward can be placed out of doors. This means that the hospital can practically be converted into an open air hospital during the spring and summer. Outdoor treatment can, of course, be given also in the winter and any part of the building can be used at any time for the treatment of patients suffering from tuberculosis, from chronic diseases of the bones and joints, from pneumonia, or from any type of disease for which special outdoor treatment may be desired.

—The State Board of Administration has contracted for the purchase of a tract of 1,533 acres of land in Crawford County for \$429,240 as a site for the new home for feeble-minded children. The last legislature appropriated \$650,000 for the purchase of such a site and the board has been considering locations in various parts of the state for more than a year. The site selected comprises 19 farms adjoining the city limits of Bucyrus, located mostly on the Lincoln Highway and reachable from 42 counties without a change of cars. Buildings include a number of excellent dwelling houses, one of which is said to be large enough to accommodate 50 children.

—A campaign was undertaken in January to raise through \$2.00 public subscriptions a fund of \$5,000 with which to lift a mortgage on the Cincinnati Polyclinic. More than 100 operations were performed at the clinic in 1920.

—Dr. Mason R. Pratt, former superintendent of Conemaugh Valley Memorial Hospital, Johnstown, Penna., assumed his duties as superintendent of Aultman Hospital, Canton, January 1. Co-

incident with Dr. Pratt's coming, plans for a number of improvements at the hospital, costing in the neighborhood of \$12,000, were announced. The entire third floor of the nurses' home will be remodeled to provide quarters for a larger staff of nurses and student nurses, a new elevator will be installed and other changes made.

—Six months ago Toledo's new Maternity and Children's Hospital was opened and it is now filled to capacity. Every facility for the better care of the mother and child has been incorporated in this institution. Since the untimely death of Dr. H. J. Morgan, the pediatric department has been in charge of Dr. S. D. Giffen.

—Establishment of a new medical unit, erection of modern hospitals and enlargement of the medical corps are among extension plans contemplated at the National Military Home, Dayton, in the \$1,090,000 budget for the fiscal year beginning July 1, 1921, which is now before Congress. It is with the idea of accommodating the young men, veterans of the World War, that such plans have been made, although they are wholly tentative and dependent upon the amount allowed. The need of increased facilities for the care of tubercular patients is particularly urgent and these patients will be given first consideration in event a new unit can be established.

—Presentation to the trustees of Lima City Hospital of resolutions passed by the medical staff of the institution, favoring the erection of a new hospital building and condemning the old structure as unsanitary, unsafe, vermin ridden and in danger of fire, was followed by appointment of a committee to confer with local civic organizations to develop sentiment for the new hospital in accordance with the recommendations.

—Plans for the expansion of facilities for the medical care and education of crippled children at the Cincinnati General Hospital have been announced by Dr. Oscar M. Craven, of the city health department. It is proposed to erect on the hospital grounds suitable buildings, including dormitories for out-of-town patients as well as those of the community whose treatment may require residence at the hospital while their education and vocational training is in process. An important part of the equipment will be a brace shop where proper appliances for deformities may be readily made and fitted, and which will be open to all orthopedists and surgeons for the service of their private practice. A partial survey, Dr. Craven states, resulted in the listing of 145 crippled children of school age who are unable to attend school classes, and he believes that a complete survey would disclose about 250 more.

—Mr. W. E. Harmon of New York, a native of Lebanon, has announced his intention of giving to that city and Warren County a \$50,000 hospital building, erected on the most approved and modern lines.

File Your Income Tax Return Early and Avoid the Rush; Note Physicians' Exemptions

Work has begun on the collection of the income tax for the year 1920. Uncle Sam, through the Bureau of Internal Revenue, is addressing to every person in the United States the question, "What was your net income for 1920?" The obligation to consider his own case and to file an income tax return on time, if one is due, is laid squarely on the shoulders of every resident of the United States. Guesswork is barred.

To the physician the problem of correctly making out an income tax return for the year 1920 is somewhat more involved than that presented to the salaried man. The wage earner on a fixed salary has an accurate estimate of the amount of compensation received for personal service, while the physician's income varies from year to year. Each must figure up his net income for the last year.

GROSS AND NET INCOME

Returns must show both gross and net income. Gross income includes practically every dollar received by the taxpayer during the year 1920, and the net income is determined by subtracting from gross income certain deductions specified by the revenue law.

The physician must make a return of all fees salaries and other compensation for services rendered, together with income from all other sources. If he keeps his accounts on the "receipts and disbursement" basis—which means a record of the amount received and the amount paid for expenses—he should file his income tax return for the year 1920 on that basis. If he keeps books showing income accrued and expenses incurred during the year, he must make his return from his books and include all income, even though not entered on his books. If books are kept on the accrual basis the taxpayer must include all income that accrued, even though not actually received, and may deduct items of expense, although not actually paid.

SPECIAL EXEMPTIONS

As the deductions or exemptions have been subject to frequent changes from year to year, a list of those applying to physicians has been secured by *The Journal* from the local revenue department, with the approval of the Revenue Department at Washington, and is given here for the convenience of Ohio physicians in preparing their returns. The items listed below may be legitimately deducted from the gross income.

Rental of offices not owned; light, heat, fuel and laundry. Attendant's salary; telegraph and telephone service; stationery and medical journals; automobile up-keep; membership dues in medical or technical societies; depreciation on technical books, automobile, buildings, office furniture and fixtures. Automobile license. (Twenty-five per cent. is counted by the department as a reasonable depreciation for automobiles; 10% for office furniture and fixtures, and books).

All taxes except income tax, narcotic tax, and street assessments; donations to corporations or associations organized for charitable, religious or educational purposes up to 15% of net income, including such contributions. Insurance premiums on office and other professional equipment; physicians' liability insurance and automobile liability insurance, if the entire upkeep of the automobile is legitimately deducted as a professional expense.

GENERAL EXEMPTIONS

The income tax applies to women as well as men. Husband and wife must consider the income of both plus that of minor dependent children, and if the total equals or exceeds \$2,000 a return must be filed. A minor who has a net income in his own right of \$1,000 or more must file a separate return. To be allowed the \$2,000 exemption a married person must be living with husband or wife on the last day of the taxable year, December 31, 1920.

Single persons, though required to file a return if their net income for 1920 was \$1,000 or more, are, if they are the heads of families, granted a special exemption under the revenue laws. Such a person is defined by Treasury regulations as "a person who actually supports and maintains in one household one or more individuals who are closely connected with him by blood relationship, relationship by marriage or by adoption, and whose right to exercise family control and provide for these dependent individuals is based upon some moral or legal obligation." Such persons are allowed the exemption of \$2,000 granted a married person. In addition, they are allowed a credit of \$200 for each dependent under 18 years of age or incapable of self-support because mentally or physically defective.

TAX RATES

The normal tax rate for 1920 is the same as for 1919—4 per cent. on the first \$4,000 of net income above the exemption and 8 per cent. on the remaining net income. In addition to the normal

tax a surtax is imposed upon net income in excess of \$5,000.

WHEN DUE

This year, as last, the tax may be paid in full at the time of filing the return, on or before March 15, 1921, or in four installments, the first of which is due on or before March 15, the second on or before June 15, the third on or before December 15. Heavy penalties are provided for failure or willful refusal to make a return and pay the tax when due.

Full instructions for making out returns are contained on the forms, copies of which may be obtained from collectors of internal revenue. Persons whose net income for 1920 was \$5,000 or less should use Form 1040A. Those with incomes in excess of \$5,000 should use Form 1040.

County Secretaries in Session at Columbus

(Continued from page 113)

caused the meeting to last until eleven-thirty; absent members heard about it and pricked up their ears. Dr. Kuntz believes that tact is one of the most essential blessings of a secretary. He closed with a description of a snappy card announcement which his society uses, headed with the little poem:

"What sort of a society would our society be
If every member would be just like me?
Better or worse would our society be
If every member would be just like me."

Dr. Robert C. Austin of Dayton, secretary of the Montgomery county Medical Society, spoke on behalf of Dr. A. F. Sarver, secretary of Darke County Society, who was scheduled for the subject "Formulation of County Society Programs," but was unable to be present because he was spending his honeymoon in the east. Dr. Austin complimented Dr. Sarver by saying that he exemplified more of the requisite qualities of a good secretary than anyone he knew. He described the effective way in which the Darke County secretary formulates good programs. Previous to the beginning of the new year, cards are sent to all members requesting them to say what subjects they would like discussed during the coming year, and to give the names of out-of-town speakers they would like to have address the society. Meeting announcements sent out state that Dr. So-and-So, one of the leading surgeons of, will speak on a certain subject. Some of the distinctions of the visitor are also pointed out to give impetus to attendance.

Other discussants were Drs. E. H. Porter of Seneca County; J. A. Dodd of Marion; Maurice Loebell of Muskingum; F. M. Fitton of Butler, and Nelia B. Kennedy of Hancock.

Dr. Teachnor brought the meeting to a close by stating that the General Secretaries Committee in its annual report to the House of Delegates would recommend the holding of at least one conference of county secretaries each year, prefer-

ably at the time of the annual meeting; that the secretaries organization be made a factor in the State Association by designating it as a special section having its own program at the annual meeting, which might consist of a luncheon meeting and discussion, replacing the one hundred per cent. luncheon; and that the county societies defray from their treasuries the annual dues of the secretary as a small measure of compensation for his valuable services, and that his expenses in attending at least one secretaries' conference each year also be paid from the county society treasuries.

Secretaries registered at the meeting were: Drs. Nelia B. Kennedy, Hancock County; J. M. King, Columbiana County; Maurice Loebell, Muskingum County; C. H. Denser, Greene County; H. F. Rapp, Scioto County; M. L. Pratt, Logan County; E. H. Porter, Seneca County; J. S. McClellan, Belmont County; E. J. Marsh, Union County; Robert Austin, Montgomery County; J. A. Dodd, Marion County; Rees Philpot, Delaware County; F. M. Fitton, Butler County; C. I. Kuntz, Sandusky County; J. A. Beer, Franklin County; W. E. Shrontz, Licking County, and Mr. Guy M. Wells, of the Cleveland Academy.

Plans for Tuberculosis Clinics

Health Commissioners of Ohio have been requested by the State Department of Health to make arrangements in their respective districts for the series of tuberculosis clinics for the examination of incipient cases of the disease which will be conducted in various parts of the state during the next few months. The clinics form part of the extension service of the State Tuberculosis Sanatorium announced some months ago, and will be conducted under the joint auspices of the state and local health authorities, the Ohio State Tuberculosis Sanatorium, the Ohio Public Health Association and the Ohio State Medical Association.

A physician from the State Sanatorium at Mt. Vernon will conduct the examinations, with the assistance of the nurse from the staff of the State Health Department. Local physicians will assist in arrangements for the clinics and are urged to bring suspected cases of tuberculosis in for diagnosis. In order that sufficient time and attention may be given to each examination a maximum of but fifteen patients will be admitted each day, but clinics will be continued as many days as may be found necessary.

The announced purposes of the clinic are: To assist local physicians in the diagnosis of early or suspected cases; to create in the patient and his family the proper attitude toward tuberculosis; to effect through the medical profession and the tuberculosis hospitals a more efficient curative service, and to inform the public in regard to the prevention and cure of tuberculosis.

ACADEMIES AND COUNTY SOCIETIES

Cleveland

(Lester Taylor, M. D., Secy.)

The 166th regular meeting of the Academy of Medicine of Cleveland was held in the Rainbow Room of the Hotel Winton December 17, 1920. This was a dinner meeting.

The regular order of business was suspended and the Academy had the pleasure of listening to a talk by Mr. William Ganson Rose, on "Old Time Cleveland Physicians." This talk consisted of historical incidents and personal memories of the earlier physicians in Cleveland. On behalf of the Academy Mr. Rose was thanked by the president, Dr. Birge, for his entertaining lecture.

The minutes of the previous regular meeting and the previous council meeting were read and approved. The secretary then read his annual report which was approved and placed on file. Following this the annual reports of the Treasurer and the Auditing Committee were heard.

The reports of the standing committees, including the Membership Committee, Program Committee, Legislative Committee, Committee on Public Health, and the Civic Committee were read and approved.

Dr. J. J. Thomas presented the report of the Milk Commission which was accepted and placed on file.

The tellers reported the following officers elected for the ensuing year: President, Dr. W. B. Chamberlin; vice-president, Dr. H. N. Cole; secretary-treasurer, Dr. Lester Taylor; trustees, Drs. Wm. H. Weir and R. K. Updegraff.

The president-elect was then escorted to the chair and the retiring president, Dr. Birge, outlined briefly the work of the Academy of Medicine during the past year, laying emphasis on the increasing influence which the Academy had exerted on public health and civic matters and the development of this relation to various civic bodies. The new president, Dr. Chamberlin, then spoke briefly of some of the problems of the future.

On motion of Dr. G. W. Crile a vote of thanks was extended to the officers and council of the Academy for their activities in the preceding year.

Attendance 109.

COUNCIL MEETINGS

The regular meeting of the council of the Academy of Medicine was held December 14, 1920, at the University Club, with Dr. R. H. Birge in the chair and the following members present: Drs. Berkes, Brookhart, Chamberlin,

Cummer, Dexter, Follansbee, Lenhart, Sanford, Selzer, Stone, Taylor, Thomas, Updegraff, Young, Mr. Wells.

Sixteen men whose names had previously been published were elected to membership and four were accepted on transfer from other counties.

The resignations of Drs. W. C. Weber, R. M. Manley and G. L. Haefle were accepted.

The Legislative Committee reported through Dr. Sanford that it had investigated the present status of the coroner and requested authorization to work in conjunction with the Bar Association to draft a suitable bill regulating this office. This authority was granted.

Dr. Follansbee, as chairman of the Committee on Public Health Insurance reported on the general policy of the incoming administration at Columbus on medical legislation.

The Committee on Failure to report Communicable Disease submitted for approval drafts of letters sent to various doctors who had been called before the committee. This approval was granted by council.

The Committee on Collecting and Auditing System reported through Dr. Berkes and submitted a proposition from the Cleveland Retail Credit Men's Association to grant membership of the entire Academy in that organization for \$600.00 a year. The committee also outlined a plan for the bookkeeping and accounting for any individual member of the Academy who so desired. The report was accepted and the committee dissolved.

Dr. Cummer reported for the Program Committee on the program for the next three regular meetings.

The committee appointed to cooperate with Lakeside Hospital in considering their dispensary and night clinic situation reported through Dr. Berkes. The committee agreed that at present there was no need of night clinics in medicine, surgery, ear, nose and throat but that the public health situation justified a pay night clinic for general diseases in the acute stages at private practice rates. The report was accepted with the approval of the council.

Dr. Berkes further reported for the committee working with the Hospital Council and suggested that to facilitate the work of the committee much information was necessary as to the exact amount of charity and reduced fee service being given by the medical profession in Cleveland. The report of the committee was approved and it was authorized to issue the questionnaires desired to all the doctors in Cleveland to secure the necessary information.

The sub-committee appointed to consider the question of pay clinics attached to the Babies Dispensary submitted a lengthy report condemning, and giving their reasons for not approving, diagnostic clinics, partial pay clinics and day clinics planned to care for patients who should

be handled by private practice. The report was approved as read.

Dr. Cummer reported that with the exception of three, the pictures of all the former presidents of the Academy were hung in the auditorium.

The secretary was authorized to buy a movable table for the use of the stereopticon to be used in the auditorium.

Dr. Berkes submitted a report on the nursing situation in Cleveland and on his recommendation the council authorized the president to appoint a committee to formulate a resolution to present to the next meeting of the State Board in regard to changing the curriculum for under-graduate nurses.

Mr. Selzer called attention to the council to the necessity for more care in the writing of prescriptions for alcohol and narcotics. He also reported on the matter of a druggist who had been advertising to treat disease and said the Druggists' Association has ordered this practice stopped.

A special organization meeting of the council of the Academy was held December 28, 1920. Dr. Lester Taylor was unanimously re-elected secretary-treasurer, and the following were elected as chairman of the standing committees: Legislative Committee, Dr. H. L. Sanford; Public Health Committee, Dr. J. J. Thomas; Civic Committee, Dr. A. J. Skeel; Membership Committee, Dr. L. S. Brookhart; Program Committee, Dr. H. G. Sloan.

Columbus

(James A. Beer, M. D., Secy.)

At the annual banquet of the Columbus Academy of Medicine, held at the Seneca Hotel, December 20, election of the following officers for the year 1921 was announced: President, Dr. George C. Schaeffer; vice-president, Dr. Leslie L. Bigelow; secretary-treasurer, Dr. James A. Beer; delegates, Drs. C. W. McGavran, John M. Thomas and J. H. J. Upham; trustee, Dr. John Rauschkolb.

Toledo and Lucas County

The Academy of Medicine of Toledo and Lucas County brought a most successful year to a close with its annual meeting in the form of a free banquet at the LaSalle and Koch Dining Hall and Auditorium on January 7. Dr. L. A. Levison was elected president for the ensuing year and Drs. J. F. Wright and W. W. Alderdyce re-elected to their posts as secretary and treasurer, respectively.

Over two hundred members and guests attended the meeting, including Lucas County's State Senator and two of her Representatives. The 200 physicians present made a rather striking impression, causing the legislators to express wonder and ask if it were the state meeting. They

were informed that it was only a part of the doctors' local organization.

Immediately after the dinner, the annual report of the academy's legislative committee was heard. The report was in reality a terse and brilliant presentation of what the medical profession stands for, its altruism, preventive measures and general conservation of humanity. Each legislator was then called upon for an address, after which there was a general reception and get-acquainted program. Lucas County is now in better position to get honest and unbiased representation in the legislature than it has been for years. The effect of such meetings is particularly fine, especially when a full representation of the membership turns out.

COUNTY SOCIETIES

FIRST DISTRICT

Clermont County Medical Society, meeting in the office of Dr. R. C. Belt of Milford with 10 members present, elected Dr. A. D. Spence president for the coming year. Other officers chosen were: vice-president, F. H. Lever; secretary-treasurer, O. C. Davison; censors, Allen Rapp, J. L. Formorin, F. C. Curry; legislative committee, T. A. Mitchell, E. C. Ireton. The society voted to raise dues from \$5.50 to \$7.00 per year. Dr. Carothers, First District councilor, made an excellent address on "Fractures", paying particular attention to pain as a diagnostic symptom. He also spoke of open method of treatment and emphasized the importance of the X-ray as a protective measure to both patient and physician.—O. C. Davison, Secretary.

Clinton County Medical Society announces the election of Dr. F. A. Peele as its president for 1921; Robert Judkins, vice-president; Kelley Hale, secretary-treasurer; E. Briggs, delegate; Elizabeth Shrieves, alternate.—Kelley Hale, Secretary.

SECOND DISTRICT

Champaign County Medical Society at its annual meeting on December 10 elected the following officers for 1921: President, David H. Moore; vice-president, Mark C. Houston; secretary, J. F. Shultz; legislative committeeman, D. C. Houser; all residents of Urbana.—E. R. Earle, Secretary, 1920.

Clark County Medical Society, in session at the Springfield Chamber of Commerce, December 27, reviewed the work of the past year and selected officers and made plans for the new year. The election resulted in the choice of William Ultes as president; J. A. Link, vice-president; R. R. Richison, secretary; F. P. Anzinger, treasurer, and J. D. Moore, delegate.

Darke County Medical Society devoted its meeting of January 13 to a discussion of "Interesting Obstetrical Experiences." Those participating were I. H. Hawes, H. A. Snorf, A. W. Rush and W. C. Gutermuth.—B. F. Metcalf, Correspondent.

Montgomery County Medical Society on January 7 heard addresses by Dr. Fred K. Kislig and Dr. Robert C. Austin. Dr. Kislig related some interesting war experiences, while Dr. Austin spoke on "The Value of Basal Metabolism Tests in the Diagnosis and Management of Goitre."

Miami and *Shelby County* Societies followed their custom of previous years and held a rousing joint session in Sidney on January 6. Speakers of the occasion were Dr. Harry S. Noble of St. Marys and Dr. Gainor Jennings of West Milton. The latter presented in clear style the legislative situation facing the medical profession and his address resulted in adoption of the following resolution:

Whereas, there has been, by an initiative petition, a bill introduced before the Ohio Legislative Assembly at the present session for the creation of a Chiropractic Board whose function shall be the examination of those of that cult who desire to practice it in Ohio.

The creation of such a Board would establish a precedent for the creation of a multiplicity of boards; each new cult that might spring up like a mushroom, would demand a board, thereby creating such exploitation of the sick as has never before been. Such board would have a tendency to lower educational standards, menacing the public health, and creating an unnecessary economic burden.

There will also come up for consideration and, perhaps, passage of a bill known under different names in the various states, namely, industrial, social or health insurance; it is a misnomer as it is not insurance but a subsidy; socially and economically, it has not proved what its proponents have claimed. In Germany and England it has failed to alleviate poverty or increase the social status of the laboring class or improve their efficiency.

Therefore, Be It Resolved, by the joint Medical Societies of *Miami* and *Shelby* Counties, now in session, that we oppose these bills and earnestly request our Senators and Representatives to use their influence in their defeat.

THIRD DISTRICT

Allen County Medical Society convened in regular session at Lima, December 16, with 33 members present. Through the courtesy of Drs. Johnson, Tillotson, Yingling and Baxter, by invitation the meeting was held in the waiting room of their offices, a delightful place.

The paper of the evening was given by Dr. T. R. Johnson, on "Some Things About the Diagnosis and Treatment of Syphilis." The paper brought out an interesting discussion which was opened by Dr. Tussing followed by Drs. Clark, Vail, Stueber, Parent, Baxter, Tillotson and Rudy.

After adjournment, cigars, apples, sandwiches and coffee were indulged in.

Our next bi-monthly meeting was held at Memorial Hall, January 4. The new officers for the ensuing year were inaugurated and it being the custom for the new president to deliver an address, Dr. Charles Clark gave the society a remarkably interesting and profitable talk on "The Three Great Plagues, The White, The Black and The Red." Some questions were asked and answers given by the speaker. No general discussion. Number present, 40.—A. S. Rudy, Correspondent.

Hancock County Medical Society held a splendid meeting at the Elks Home, Findlay, January 5, with 25 members and eight guests present. The guest of honor and speaker of the evening

was Dr. Walter H. Snyder of Toledo, who gave an address on "The Eye in Its Relation to General Diseases, as a Means of Diagnosis," that proved to be practical and helpful to the general practitioners. A few of the most interesting points made:

1. Do not diagnose a condition with knowledge of one fact only. Get all your facts together and add up before making your diagnosis.

2. Eighty per cent. of all headaches are from eyes.

3. When headaches occur during early morning hours, they are not from the eyes. From eleven A. M. to evening headaches are usually from the eyes.

4. Eye headaches cause pain through brows and in occipital regions never on top of the head.

5. Headaches are not all migraine. Migraine is a functional psychosis. Prominent among symptoms is the scintillation and blind spot, noticed by patient, which may be followed by a splitting headache. Caused by anemia of the blood vessels of the eyes, rather than by congestion. Correct refraction relieves.

6. Tuberculosis, especially in children, can many times be diagnosed by eye examinations.

Phlyctenular conjunctivitis and redness along the edge of some portion of the cornea, usually the nasal side, indicates presence of tuberculosis. Many times proper nourishment will place the child in normal condition.

7. Examination of the retina should be made in all cases of pregnancy especially where eclampsia is suspected. If the retina at any time shows partial obliteration delivery should be made. After convulsions white patches are found on the retina.

8. In embolism and thrombosis it is important to examine eyes.

9. Brain tumors can not be diagnosed by the eyes. One case was cited where no symptoms were seen in the eye. After one and a half years the patient died suddenly. Post-mortem showed glioma as cause of death. The only eye symptoms shown having been hysterical blindness which had caused no change in the eye.

10. In diseases of the spinal cord, syphilis, etc., eyes should be watched carefully.

11. Sugar should be looked for in the blood rather than in the urine.

The secretary gave her report of the state secretaries' meeting in Columbus, on January 2. A communication from the State Tuberculosis Sanitarium asking for the holding of a Tubercular Clinic in Hancock County at some time during the coming winter, was read by Dr. Baker. After discussion, it was decided to hold such a clinic at an early date. All physicians were requested to keep the clinic in mind and have cases ready to attend. Dr. Don B. Biggs was elected to act as health committeeman.

Dr. Hendershott of Tiffin, the district coun-

cilor, gave a splendid organization talk, among other things reviewing the program of medical legislation for the coming winter. It was decided to make an effort to resurrect the Tri-County Society. All present agreeing that Fostoria is a pleasant place to go, the secretary was instructed to communicate with Seneca and Wood counties with the intention of having a session in Fostoria at some date later in the year. The next meeting of Seneca Society will include the ladies of the physicians' families. Former meetings of this kind have been very successful.—Nelia B. Kennedy, Secretary.

Logan County Medical Society met January 7, in the Chamber of Commerce rooms, Bellefontaine. Luncheon was served at noon, followed immediately by a business meeting at which Dr. Zurmehly read a paper on "Puerperal Eclampsia," urging that rapid delivery be made. Dr. R. B. Pratt followed with a paper on "Contractures of the Hand," presenting a case report of Dupuytren's contracture, with microscopic slides from sections of same. Dr. Carey, county health commissioner, gave a report on the communicable diseases now prevailing in the county and urged more prompt reporting of same by the attending physician. Attendance 22.—M. L. Pratt, Secretary.

Marion County Medical Society opened the new year with an enthusiastic meeting on January 4, when the following officers were installed: President, H. L. Uhler; vice-president, M. B. Newhouse; secretary-treasurer, J. A. Dodd; delegate, Dana O. Weeks; legislative committeeman, Carl W. Sawyer, who formerly served as president of the organization.

FOURTH DISTRICT

Sandusky County Medical Society held its last meeting of the year at the home of the secretary, December 23. Twenty-five members and guests were present. Dr. H. L. Wenner of Tiffin read an excellent paper entitled "Problems in Pelvic and Abdominal Diagnosis," which was pregnant with pertinent and important facts. A lively discussion followed.

Election of officers resulted as follows: president, E. W. Baker, Clyde; vice-president, H. Shumaker, Bellevue; treasurer, W. H. Booth, Fremont; secretary, C. I. Kuntz, Fremont; legislative committeeman, E. M. Ickes, Fremont; delegate, W. H. Booth, Fremont. Drs. Booth, Kuntz and Ickes were re-elected to their offices.

In compliance with a request from the board of trustees of Memorial Hospital for members to serve as part of a medical board of the hospital, Drs. E. W. Baker, Pontius, Philo, Ickes, were selected to occupy such position.

Dr. Pontius, the retiring president, made a short address in which he congratulated the society on the showing it made in the past year and thanked the members for their loyal support.—C. I. Kuntz, Secretary.

Williams County Medical Society had as its guests on December 23, the occasion of its annual meeting, Dr. Charles Lukens, president of the State Association, Dr. John G. Kellar, councilor of the Fourth District, and Dr. Chester Waggoner of Toledo. Dr. Lukens gave an impressive talk on state organization and Dr. Keller on local necessities. Dr. Waggoner's exposition of "Cardiac Conditions" was unusually instructive and highly appreciated. Officers elected for 1921 are: president, W. L. Hogue; vice-president, W. H. Steele; secretary-treasurer, J. A. Weitz; censor for three years, F. E. Solier.—J. A. Weitz, Secretary.

Wood County Medical Society has chosen as its president and secretary for the new year, Drs. James W. Rae and Frank V. Boyle, of Bowling Green, succeeding Drs. J. C. Aurand of Weston and H. W. Dierksheide of Pemberville, respectively.

FIFTH DISTRICT

Erie County Medical Society held an enthusiastic meeting in Sandusky, December 30. Dr. F. F. Lehman was reelected to the presidency; J. D. Parker was chosen vice-president; Hugo N. Sarchet, secretary-treasurer; Charles Graefe, delegate; Henry Graefe, alternate; and the following were named as standing committeemen—public health, Henry Schoepfle; legislation, Chas. Graefe; medical progress, G. H. Boehmer. The society voted to accept the invitation of Good Samaritan Hospital to hold its meetings in the board room of the hospital. Dr. Lehman delivered an excellent address on "Some Extra-Therapeutic Functions of the Modern Doctor of Medicine."

Lake County Medical Society's annual banquet, held at the Parmly Hotel, Painesville, January 3, was an enjoyable event, attended by 25 physicians and their wives as guests. One of the features which enlivened the affair was the placing of conundrums under each member's plate which he was required to answer before eating. No doctors were reported to have starved. The post-prandial program consisted of toasts and stories by Drs. A. P. Brady, J. V. Winans, W. P. Ellis, T. M. Moore, V. H. Tuttle and W. Montgomery; an address by Judge Clark H. Nye on "The Power of Unanimity," and violin selections.

Lorain County Medical Society held its regular monthly meeting in the Lorain Public Library, January 11. Dr. John R. Pipes of Avon Village, the new president, made an excellent address, in which he covered the field of medical organization very thoroughly; and Dr. George D. Nicholas of Elyria spoke on "Industrial Medicine and Surgery." Dr. Nicholas' paper was discussed by Drs. Z. Pitcher and D. D. Grimm.—W. E. Hart, Secretary.

SIXTH DISTRICT

Portage County Medical Society met in Dr.

Krape's office, Kent, January 5, with President Andrews in the chair. In the absence of the secretary, Dr. S. U. Sivon was appointed secretary pro tem. Dr. Andrews presented a paper on "Unconsciousness" which was very complete and left little to be added in the discussion. Dr. Krape brought up a case of epilepsy which was very interesting from the standpoint of treatment. Dr. Sivon spoke of the work being done in epilepsy by Dr. Dandy of Baltimore and particularly called attention to one unusual case of cardiac asthma. Dr. Nichols suggested to the program committee that two members be delegated to review one of the leading medical journals each month and report to the society on the most interesting subjects found. The suggestion met with unanimous approval and Drs. Nichols and Knowlton were selected to report at the February meeting. Dr. Worden, county health commissioner, discussed the health demonstration being undertaken in that county, and invited the society to hold its next meeting at his residence. A delightful buffet lunch was served by Dr. and Mrs. Krape.—S. U. Sivon, Secretary pro tem.

Richland County Medical Society has chosen as its officers for 1921, Dr. G. C. Smith, president; Charles R. Keller, secretary-treasurer; S. E. Findley, delegate; D. W. Peppard, legislative committeeman, and F. A. McCullough, medical defense committeeman.

Summit County Medical Society met, January 4, with 70 members present, and in addition to the annual installation of officers enjoyed a short spicy program. R. G. Pearce talked on "Metabolism, Respiration and Circulation," followed by a discussion by S. Wright, J. N. Weller, L. B. Humphrey, T. Hollingsworth and J. M. Ulrich. "Cardio-vascular Disease" was the subject of a talk given by J. G. Gage and discussed by Drs. Pearce, Hollingsworth, Humphrey and Weller.—A. S. McCormick, Secretary.

Wayne County Medical Society, in session at Wooster, January 4, elected Dr. O. P. Ulrich of Orrville, president, and Dr. Fred Snyder of Orrville, secretary-treasurer, succeeding Drs. A. O. Smith and J. R. Jameson, of Wooster.

SEVENTH DISTRICT

Belmont County Medical Society met for its regular meeting on December 15 and elected the following officers for 1921: president, R. H. Wilson, Martins Ferry; vice-president, J. A. Clark, Bellaire; secretary-treasurer, J. S. McClellan, Bellaire; censors, P. L. Ring, D. M. Murphy, J. O. Howells; legislative committeeman, R. H. Wilson; medical defense committeeman, J. A. Clark; delegate, A. W. Diven; and alternate, Clyde Kirkland.—J. S. McClellan, Secretary.

Coshocton County Medical Society, in session at Coshocton, December 23, enjoyed a paper on "Public Health Service, Especially with Regard to the Treatment of Ex-soldiers," by Dr. Samuel Cohen. Dr. J. G. Smailes followed with a talk

on "Endocarditis" and reported a number of specific cases. Dr. D. Edmund Cone was elected president; J. G. Smailes, vice-president; J. D. Lower, secretary-treasurer; E. C. Carr, delegate, and Samuel Cohen, alternate.

Tuscarawas County Medical Society met in the mayor's office, Uhrichsville, January 13. Program: "The County Health Organization," E. V. Berry; discussion by E. C. Davis. "Aconite," Dr. J. A. McCollam.—Paul J. Alspaugh, Secretary.

EIGHTH DISTRICT

Morgan County Medical Society met in McConnelsville on December 21. After a short business session and the election of officers for the coming year, which resulted in the selection of C. V. Davis, president; Louis Mark, vice-president, and Donald G. Ralston, secretary-treasurer; the society listened to a very interesting address by Dr. C. E. Northrup on "Peritonitis as a Secondary Consideration." The paper was ably discussed by Lee Humphrey, Louis Mark and J. B. Naylor.

Muskingum County Academy of Medicine held its January meeting in the dining room of the Y. W. C. A., on the 5th. Dr. Jonathan Forman of Columbus, read a paper on "The Clinical Value in Studies of Expired Air." The subject was timely and as Dr. Forman has done some original research work on basal metabolism, his talk proved very profitable.—M. A. Loebell, Secretary.

Washington County Medical Society held its last meeting of the old year in Marietta on December 8. Mr. B. O. Skinner, county superintendent of schools, was the speaker of the evening and had for his topic "Mental Tests." The members were given an insight into the progress of the educational boards in the country on a new system of grading the pupil by tests of mental equipment for advancement rather than the present system of moving up a grade a year. The charts which were used to illustrate the subject gave a very concise outline of the method.

The meeting closed with the election of the following officers for the year: President, E. W. Hill, Jr.; vice-president, S. A. Cunningham; secretary, A. G. Sturgiss; treasurer, E. W. Hill, Sr.

NINTH DISTRICT

Gallia County Medical Society met, December 9, for its annual election of officers. Dr. C. G. Parker was chosen president; S. W. Williams, vice-president; Milo Wilson, secretary-treasurer; J. S. Biddle, medical defense committeeman; W. E. Howell, C. B. Parker and J. S. Biddle, legislative committee.—Milo Wilson, Secretary.

Jackson County Medical Society's annual election on December 7, resulted in the selection of its secretary, Dr. A. G. Ray of Jackson, for the office of president in 1921. Dr. Ray succeeds Dr. W. H. Parker of Wellston, while Dr. R. W. Caldwell assumes the secretaryship.

Lawrence County Medical Society, in session at Ironton January 6, enjoyed an interesting paper by its president, Dr. O. H. Henninger, on "Tuberculosis, from a Post-War Standpoint." To stimulate attendance the society has changed the time of its meetings from the afternoon to the evening of the first Thursday of each month, and during the summer meetings will be held in different parts of the county.—E. E. Ellsworth, Secretary.

Scioto County. The annual banquet of Hempstead Academy of Medicine on December 13 drew almost a one hundred per cent. attendance of the membership. In a talk on "Some of The Problems of the State Association," Dr. J. S. Rardin, Ninth District councilor, recounted the difficulties facing the profession and reminded members of their duty to medical organization and humanity. The next speaker, Dr. John Greiwe of Cincinnati, the guest of the evening, spoke on "Newer Studies in the Abnormal Heart." Dr. Greiwe demonstrated his ability as a teacher when he simplified the physiology and some of the phenomena of the irregular heart. All had an enjoyable evening and felt greatly stimulated by the "call to duty" and the "appeal for careful study." Officers for 1921 are:

President, Dr. Tunis Nunemaker; vice-president, Dr. James S. Frizell; secretary-treasurer, Dr. Harry F. Rapp; delegate, Dr. Oral D. Tatje; censor, Dr. J. W. Obrist; librarian, Dr. A. L. Test.

TENTH DISTRICT

Crawford County Medical Society held its annual banquet and regular meeting for the election of officers at Bucyrus, December 17. Eighteen members were present and after a splendid banquet the officers for 1921 were elected: president, R. J. Caton, Bucyrus; vice-president, C. A. Ulmer, Bucyrus; secretary-treasurer, H. S. McClure, Bucyrus; delegate, H. H. Hartman, Galion; alternate, J. A. Agnew, Crestline; censor for 1921-22-23, F. W. Virtue, Sulphur Springs. Drs. Murr and Mandeville of Galion were appointed as an auditing committee to audit the books and accounts of the outgoing secretary-treasurer. Dr. Sylvester J. Goodman of Columbus, Councilor of the Tenth District, gave a very energetic address concerning many important subjects that are of much interest to the society and the medical profession, and discussions by members followed.

The new president, Dr. Caton, appointed the legislative committee which consists of W. G. Carlisle, chairman, C. A. Ulmer, and W. L. Yoe-mans, all of Bucyrus.—H. S. McClure, Secretary.

Delaware County Medical Society at a called meeting on December 21 elected Dr. I. T. McCarty as president for 1921, and Dr. Rees Philpott, secretary-treasurer. The former succeeds Dr. F. V. Miller, and the latter Dr. O. W. Bonner.

Ross County Medical Society, meeting in Chillicothe, December 7, re-elected all of its 1920 officers for the new year. At the meeting prior to that, the society was entertained with a smoker by President G. E. Robbins at his home. Rev. J. C. Jackson of Portsmouth, a former resident of Chillicothe, was the guest of the occasion and gave a most entertaining talk.

Assistant Physicians of State Hospitals Hold Semi-Annual Meeting

The thirty-third semi-annual meeting of the Association of Assistant Physicians of Ohio State Hospitals, was held at Massillon State Hospital, December 7-8, with fourteen representatives of state institutions in attendance.

The session opened with an address of welcome by Dr. A. G. Hyde, superintendent of the local hospital, which was followed by the address of the president, Dr. W. H. Vorbau, of Lima State Hospital. The first day's program included the reading of a paper on "Psychic Factors in Epilepsy," by Dr. S. C. Niles of Toledo state hospital; a talk on "Psychopathic Personalities," by Dr. L. W. Yulles of Cleveland; and a talk on "Social Service in State Institutions," by Dr. D. A. Johnson of Longview Hospital, Cincinnati.

The program of the closing day of the conference started with a clinical demonstration presenting the different phases of psychosis. The clinic was followed by an address by Dr. R. E. Bushong of Toledo on "Medical Work in State Hospitals." F. A. Osborne of the Athens State Hospital talked on "Psychoses Incident to and Following Pregnancy." Dr. C. E. James of the local institution gave the final talk of the program, his subject being "Dementia Praecox."

The annual election of officers resulted in the selection of Dr. R. E. Bushong, Toledo, as president; Dr. C. E. Jones, Massillon, vice-president, and Dr. H. C. McIntyre, Cincinnati, secretary-treasurer. On the last evening of the convention the visiting physicians were guests of the Massillon hospital staff at a theater party, followed by a dinner at the residence of Superintendent Hyde.

CHILD HYGIENE WORK

How far the states have officially recognized the importance of child welfare work is brought out in the annual report of the Children's Bureau of the United States Department of Labor. At the present time 35 states have created child hygiene or child welfare divisions. Before organized effort for such divisions was carried on as a part of the children's year campaign only eight states had such divisions.

New Jersey has appropriated \$150,000 a year for its child hygiene division. This is the largest budget so far adopted by any state, but some bureaus with only meager appropriations, through the cooperation of medical, public health and social welfare organizations, have been able to carry out far-reaching plans of health work.

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PATHOLOGY---Tissues - - - \$5.00

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MEDICAL COMMENT ABSTRACTS AND CURRENT TOPICS OF INTEREST

Lipoid Dressing in the Treatment of Wounds and the Control of Infections

(Continued from the November, 1920, issue)

SOME OF ROBERTSON'S VIEWS

'ENZYMES' may be shortly defined as the catalysts produced by living organisms."

"Most enzymes are extraordinarily sensitive to changes of hydrogen in concentration. This is a common property of the colloidal state and points to the intervention of electrical change."

"The discovery of a submarine cable engineer—Mr. Arthur E. Baines—that the personal electro motive force given off from his own body to the air of the testing room was sufficient to vitiate his experiments with a sensitive galvanometer, was the starting point of over twenty years patient investigation of the electro motive force in plant and animal physiology."

"Baines's experiments prove that every cell and every part of a plant, leaf, flower, fruit, or tuber is electrically active. But if such vegetable cells are exposed to heat at a temperature above that which is lethal to 'ferments,' electrical action, as a feature of plant life, comes to a stop and with it, the chemical processes which are the other evidences of living cells."

"The failure of current registered in divided nerves by galvanometric methods of examination; the lowered deflection on the same instrument in cases of neurasthenia; the isolation of inflammatory processes to one nervous distribution in cases of herpes, shingles and acute lobar pneumonia; the failure altogether of deflection from the electrically 'dead' cells of a superficial cancer area; these are all facts which the galvanometer has constantly registered in our hands."

The temporary closure of an escape to "earth" of this current in inflamed areas by means of a "dielectric" (insulating) substance such as collodion or paraffin and the resulting control and suspension of the inflammation process, are facts so easily demonstrable, and now so often demonstrated, that we are compelled to realize that in the natural cell there exists a dielectric substance, or substances, whose function is the prevention of current dispersal and diffusion, and whose presence, if the body be indeed an electrical installation, must be postulated."

"Lipoids and especially cholesterols, play the protective role in cells against toxic invasion."

"The treatment of skin diseases was successful when for inert vaselin was substituted vital organic vitamin substrates containing lipoidal substances like lanolin, spermoil and spermaceti."

"Cholesterol is found in all protoplasmic bodies, but it is significant that it is found especially abundant in nervous tissues and particularly in the white substance of Schwann. In the brain it occurs in the free state. As is well known, it may, under pathological conditions, separate out from the bile in the form of gall-stones."

"As to the office of the tissue cholesterol, it can only be suggested that a substance so ubiquitous must be important. There is some evidence that cholesterol, free or combined, plays a part in conferring on the cells those peculiarities in their permeability upon which their functions and indeed their integrity, depend. Free cholesterol, for instance, hinders the hemolytic action of the saponins apparently by forming compounds with them."

"Lecithins have, in common with fats to which

they are so nearly allied in composition, the property of solubility in alcohol and ether; they are also miscible in every proportion with fats; but at the same time they have the power of swelling and becoming slimy in water. For this reason they appear peculiarly adapted to aid the interaction of watery solutions and substances not soluble in water, and to take part in the most various chemical processes in the tissues."

"We have been accustomed to consider cells as being built up of proteids, carbohydrates, hydrocarbons, salts, gases and moisture and only in comparatively recent years have we realized that this very simple classification does not meet our needs in the practical examination of physiological life."

"There is, then, something not of a chemical nature, in the constitution of living protoplasm which can be rendered inactive by the action of heat. I submit that 'sterilization' by heat—the destruction of life—is brought about by overcoming the natural insulation of electro-motive force and so causing electrical diffusion; that life itself and every manifestation of it is controlled by electrical processes in equilibrium, that chemical functioning is the expression of electro-physical activity in given media with constant changes and that death, cellular or somatic, is the expression of diffusion only."

"Starvation of any essential element of cell growth or activity readily reacts upon the cells themselves, and metabolic changes occur which tend to lower potential in the cell, and, generally throughout the body. Cells robbed of the material necessary for their growth, maintenance and activity are starved, and undergo changes similar to those we have called toxic, and electrical equilibrium and electro motive force are lost."

THE VICIOUS CIRCLE

GROSS lesions of tissues and organs—Food deficiency—Hormone failure—Nervous degeneration—Food decomposition—Bacterial and food intoxications.

"The standard treatment of convalescents adopted by the profession—sunshine, fresh air, rest—included also a diet of vitamins—full articles with the phospho-proteids intact. These included fresh milk, butter and eggs, raw eggs, switched eggs, lightly poached or under-boiled, fresh vegetables, bone marrow sandwiches, raw meat juice or shredded meat, olive oil, oysters, fish and fruits, and farinaceous 'foods.' And our patients thrive fast upon it and arose from their illness 'better than they had ever been before they fell ill.'"

"We have no evidence of the existence of enzymes apart from the particular or group substrates on which they act."

"The presence of the so-called enzymes, 'oxydases' and 'reducases' may be explained," by the electrical surface activities of phosphorus and galactose upon the basic substrates which, as choline, neurine (lecithins), sphingosine (galactosides), are the activated substances, and it may be the active agents themselves."

"There would appear to be no chemical activity possible in the body whether of organic or inorganic elements, without this constant force provided by phosphorus."

"In the old phosphorus pill of the pharmacists it was found that phosphorus had to be combined with substances which are easily recognized as familiar natural dielectric substances, white

beeswax, melted lard, kaolin, and carbon disulphide. It is in just such photo-electric combination that phosphorus is found in the nucleins and phospho-lipines of the body."

"The conditions which determine the degradation of the intestinal mucosa in food-deficiency diseases act upon all mucous tissues partly through the sympathetic nervous lipoid failure, partly through the failure of the natural mucin, and partly through the failure of lipoid antitoxin barriers in the exoplasm of the cells. These failures lay the mucous membranes of the body open to bacterial colonization, and catarrhal conditions are easily established on mucous surfaces ordinarily immune to bacterial flora in contact with their surfaces. Thus colonization of the intestinal bronchial, and oral mucous membranes is precipitated by the common lipoid deficiency in the presence of a permanent flora."

"The calcium metabolism which determines the plasticity of the blood-serum and lymph is a thyroid-parathyroid activity."

"Lipoid-paraffin apparently has the power of penetrating the tissues, of investing cells with a barrier to bacterial and cellular toxins, of providing injured and toxic cells with the materials requisite to re-establish metabolic activity. Toxins are absorbed or oxydised or reduced in the cell, and oxygen is energized. Osmosis is brought under control and the natural cell processes are re-equilibrated. Inflammation disappears, and the more rapidly, apparently, as it is the more acute. Bacteria robbed of their pabulum—since cells are now protected—fall to the phagocytes, and the wound becomes quiescent, granulates healthily, and heals over with sound epithelium. The scar obtained is in every way satisfactory."

The comfort of the dressings is certainly very marked.

"Sleep and freedom from pain were the rule."

APPLICATION OF THE DRESSING

WOUNDS must first be fully exposed in their whole extent. With Lipoid-paraffin dressings this can be done fearlessly, as the dressing itself prevents septic invasion of the new surfaces exposed, and this is a decided gain. The rapid reduction of acute streptococcal cellulitis is strong evidence of this. Sequestra must be removed before applying the dressing at all, and, of course, all wound surfaces should be cleaned up as far as at all possible to secure good results.

The wound surfaces can be dried with spirit and the Lipoid-paraffin gently applied with the finger to every part of the wound, which can then be packed with Lipoid-paraffin pledgets or covered with a plain gauze and wool dressing of Lipoid-paraffin. Over all is placed a sufficiency of oil silk.

Two points are of importance:

(1) The dressing will dry if an unwise economy denies a generous supply. Dressings must be generously soaked and renewed, especially in the more acute inflammatory conditions.

(2) It must be remembered that in any extensive septic wound or inflammation the tissues for a considerable area above and below and behind the wound are toxic, indurated, and out of gear. *The dressing must take in the whole area of normal lymph circulation all around.* This helps quickly to re-establish the natural healing process. The spread of the oil through the bed clothing must be guarded against."

LIPOID-PARAFFIN AND THE PNEUMONIAS

THE pneumonias which do not dramatically surrender to the liquid paraffin oil dressing over the lungs within 24

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AS introducers of Cascara Sagrada to the medical profession, as students of the therapeutics of the drug for many years, as inventors of new processes in Cascara manufacture, as creators of a world-wide demand for Cascara products, we are justly entitled to the designation of "The Cascara House."

The medicinal value of Cascara Sagrada was unrecognized until we introduced the drug to physicians in 1877. At that time our research work was devoted to the vegetable materia medica. Synthetic chemistry and biological therapy were practically unknown.

Cascara was one of the important discoveries made during this period. For years, with the aid of men eminent in botany, chemistry, pharmacology and therapeutics, we labored to establish the position of Cascara Sagrada as a medicinal agent, and among other things we directed it to the attention of the British Medical Association at a meeting held in Cork, Ireland, in 1879.

That our original estimate of the drug was not exaggerated has been proved by subsequent history. Cascara Sagrada has maintained its reputation as a tonic laxative, and it has come to be recognized by the Pharmacopœias of all civilized nations.

We were not only pioneers in the introduction of Cascara, but throughout all the years which have since intervened we have devoted time and money and experimentation to the improvement of Cascara preparations. We have studied the subject exhaustively. The fruit of this long investigation is now to be seen in a line of products that are the acknowledged leaders in their field.

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hours are the pneumonias which are continuously fed by toxic absorption of bacterial and food decomposition elements from the intestinal tract."

"In this class of cases the treatment of the intestinal mucosa is the key to the treatment of the respiratory and pharyngeal conditions. The internal flushing of the alimentary tract with liquid paraffin does certainly reduce the toxic absorption."

"It is in acute croupous pneumonias that we find involvement of a branch of the vague from its center in the bulbar nucleus to its distribution in one lobe of a lung, or if more than one branch is effected, more than one lobe, or even lobes on both sides of the chest. I wish to emphasize this matter of nerve-distribution because it is the most striking example we can study of the nervous origin of inflammatory processes.—Consider the position: One healthy lobe is separated from another lobe in a condition of acute inflammation in which bacterial activity is at high pressure. Nothing between the lobes which are in actual contact but their pleural coverings: This lasts for eight days, and then the process comes to an end without any involvement as a rule, of the sound lobe. If this happens it involves the whole lobe. It is evident that we have here to do with initial failure of the nervous cells governing the affected lobe, the result being a sharp reduction of neuro-potential in the cells supplying the current, and a lowered resistance to organisms in the area supplied because of the reduced electro motive force at the source. Bacterial colonization supervenes on lowered cell metabolism, and acute toxic infection of the lobe follows."

"Two things must be borne in mind in treating this condition with liquid paraffin. (1) The oil jacket must be thick and fully saturated with the 'paraffin,' for it is our common experience that the higher the temperature the drier becomes the dressing. A good deal of controversy has arisen over this question of penetration of the oil. We who believe that it does penetrate have been driven to this conclusion by the observed facts that (a) the dressing parts with its oil in proportion to the acuteness of the inflammation, and (b) if the dressing is not fully saturated and kept saturated by the nurse the results are not satisfactory.

(2) The reduction of inflammation locally is considerably hastened by free administration of the oil internally. Here the effect is got by stopping the absorption of ptomaines by the intestinal mucosa, by recoating the cells with lipid substitute, and by restoring the toxin barrier to the mucous surface in lieu of the mucin failure. The action is exactly the same as that of liquid-paraffin on the skin in burns and in cellulitis. The vagus toxin is withdrawn and the vagus cells recover tone and efficiency, and the restoration of electro motive force to the lung tissues quickly restores the threatened cells to full strength.

"In conclusion it is necessary to again remind the reader that as long as the general metabolism and neuro-potentials are low, whether by reason of shock and exposure, or hemorrhage, or master-toxin, or prolonged sepsis, no local dressing can be adequate to secure the best results. Chronicity and sepsis are indices of low general metabolism, and this must be set right as part of the essential treatment of any case. I have seen septic wounds healing rapidly on Lipoid-paraffin dressing, become retrograde or arrested when I suspended my usual treatment of asthenic cases of the type described with pluriglandular lecithin and potassium permanganate internally."



At the meeting of the State Medical Board on January 4th, the following physicians who successfully passed the December examinations, were granted certificates to practice in Ohio:

William Clarence Terwilliger, Akron, Chicago College of Medicine and Surgery, 1915.

Wayne Eckles Young, Mansfield, Eclectic Medical College, 1920.

Edward Justus Reilly, Georgetown University, 1920.

Adam Cluness Williamson, Youngstown, Harvard University, 1918.

Henry Villard Beries, Cleveland, Jefferson Medical College, 1920.

William Seymour Hawn, Youngstown, Jefferson Medical College, 1920.

Vern Argyle Neel, Youngstown, Jefferson Medical College, 1920.

Samuel LeRoy Bossard, Gallipolis, Loyola University, 1916.

Zacharias Spanos, Youngstown, National University of Athens, Greece, 1917.

Benjamin Harrison Carroll, Toledo, Northwestern University, 1917.

John William Metcalf, Toronto, University of Maryland, 1920.

William Walter Sirak, Cleveland, University of Maryland, 1913.

Ralph Emerson Bell, Cleveland, University of Pennsylvania, 1919.

John Harvey Skavlem, Cincinnati, University of Pennsylvania, 1919.

Guy Frederick Sykes, Toledo, University of Toronto, 1917.

Duke Lee, Cincinnati, Vanderbilt University, 1906.

Sam Harwell Patterson, Toledo, Vanderbilt University, 1920.

James Raymond Ripton, Cleveland, Western Reserve University, 1920.

Harold Riemann Davidson, Cleveland, Western Reserve University, 1920.

Earl Watson McClure, Reynoldsburg, Western Reserve University, 1920.

Orr Falls, Cleveland, Western Reserve University, 1920.

The board also issued certificates to four osteopaths, two masseurs, and six midwives who passed the December examinations.

Reciprocity Licenses

Licensed after examination in original state:

Roy Raymond Bair, Newark, New Jersey, graduate Chicago College of Medicine and Surgery, 1916, and New York Homeopathic College, 1918; intended residence, *Youngstown*.

Harold Jolly Beard, Youngstown; graduate



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Gunni Busck, Westfield, New York; graduate Columbia University, 1902; intended residence, *Cleveland*.

Charles Arbuthnot Campbell, Steubenville; graduate Medico-Chirurgical Medical College, 1912; intended residence, *Steubenville*.

Lawrence Benjamin Chenoweth, Baltimore, Maryland; graduate Johns Hopkins University, 1919; intended residence, *Cincinnati*.

Arthur Cone, Toledo; graduate University of Michigan, 1920; intended residence, *Toledo*.

Clarence Charles Crum, Dayton; graduate Louisville Hospital Medical College, 1901; intended residence, *Dayton*.

Roger Cutting, New York City; graduate University of Buffalo, 1902; intended residence, *Conneaut*.

John Gray Gage, Akron; graduate University of Michigan, 1908; intended residence, *Akron*.

Grayson R. Gaver, Cincinnati; graduate University of Maryland, 1898; intended residence, *Cincinnati*.

Milton Lowry Glenn, Dayton; graduate University of Michigan, 1899; intended residence, *Dayton*.

Gilbert Van Tassel Hamilton, Frazeyburg, Ohio; graduate Jefferson Medical College, 1901; intended residence, *Frazeyburg*.

Benjamin Harrison Hildreth, Akron; graduate

University of Louisville, 1916; intended residence, *Akron*.

Warren LaRue Hogue, Jr., Akron; graduate Northwestern University, 1919; intended residence, *Akron*.

Ross Hopkins, Columbus; graduate Johns Hopkins University, 1903; intended residence, *Columbus*.

Clarence Ludlam Hyde, East Akron; graduate University of Michigan, 1906; intended residence, *East Akron*.

Morris DeWitt Kelley, LaGrange, Kentucky; graduate Louisville Medical College, 1904; intended residence not determined.

Cecil Arden Kingman, Forest, Ohio; graduate University of Michigan, 1920; intended residence, *Toledo*.

David Lipschitz, Pittsburgh, Pennsylvania; graduate University of Pittsburgh, 1918; intended residence, *Youngstown*.

Guthrie McConnell, Cleveland Heights; graduate University of Pennsylvania, 1896; intended residence, *Cleveland Heights*.

Alexander Francis McCoy, Nicholasville, Kentucky; graduate Louisville National Medical College, 1911; intended residence, *Columbus*.

Irvile Herbert MacKinnon, Cleveland; graduate Tufts College, 1920; intended residence, *Cleveland*.

Sarah Marcus, Detroit; graduate University



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of Michigan, 1920; intended residence, *Cleveland*.

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Leonard Edward G. Nippe, Chicago; graduate Northwestern University, 1920; intended residence, *Toledo*.

Archie Francis Schultz, Fremont; graduate Indiana University, 1916; intended residence, *Fremont*.

James Harold Smith, Ann Arbor, Michigan; graduate University of Michigan, 1918; intended residence, *Toledo*.

John Howard Snyder, Sunbury, Pennsylvania; graduate Illinois Medical College, 1902; intended residence, *Mansfield*.

James Montrose Spencer, Chicago; graduate Medical College of Virginia, 1916; intended residence not determined.

George Church Sutton, Cleveland; graduate Howard University, 1919; intended residence, *Cleveland*.

Lester Hall Trufant, Oberlin; graduate McGill University, 1907; intended residence, *Oberlin*.

William Matthew Washington, (colored), Montgomery, Alabama; graduate Meharry Medical College, 1902; intended residence, *Cleveland*.

Philip Henry White, (colored), Uniontown, Alabama; graduate Illinois Medical College, 1904; intended residence not determined.

Russell Montague Young, Lima; graduate Rush Medical College, 1920; intended residence, *Lima*.

Licensed in original state on basis of diploma:

Frederick William Fischbach, Covington, Kentucky, graduate Pulte Medical College, 1889; intended residence, *Cincinnati*.

James A. Sullivan Howell, Elgin, Illinois; graduate College of Physicians and Surgeons, Chicago, 1891; intended residence, *Akron*.

Mary Poole Olsen, Worthington; graduate Medical College of Indiana, 1898; intended residence, *Worthington*.

CHANGES IN MEDICAL STAFF

Changes in the medical staff of the University of Cincinnati include the resignations of Dr. E. W. Mitchell and William D. Porter. The former was emeritus professor of clinical medicine at the University, and director of the department of contagious diseases of the General Hospital, while Dr. Porter was professor of clinical obstetrics and assistant director of the obstetrical department. Dr. Gustav Eckstein of the department of physiology, has been granted a year's leave to study abroad.

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Gave No Attention to Court's Instructions

"Of course, contrary to the instructions of the court, but characteristically without effect on the jury, the jury took the physical fact of the failure to cure, as conclusive evidence of negligence and so found for the plaintiff."

Jury Gives Man \$10,000 for Loss of Right Eye

"—was granted \$10,000 for the loss of his right eye by a jury sitting before Judge —, of the Superior Court, yesterday. The suit was brought against Dr. — on the grounds that he did not sterilize his instruments or even wash his hands before performing an operation."

Dentist Must Pay \$9,000 for Death

A verdict for \$9,000 was returned by the Circuit Court against Dr. —, dentist, who was charged with responsibility for the death of a patient.

It was claimed the Doctor was using an electric drill when a heavy thunder-shower broke, and the drill, affected by the electrical disturbance, transmitted an augmented current of electricity that burned Mrs. — mouth and gave her a shock, from which it was contended lockjaw developed. She died two days later. It was alleged the Doctor failed to have the wire, which transmitted the power to the drill, properly insulated. The Doctor denied this.

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Council Devotes Its Annual Meeting to Finances and Setting In Motion the State Meeting Wheels

MINUTES

Council of The Ohio State Medical Association met in Columbus, January 2, 1921, with the following members present: President, Lukens; President-elect Teachnor; Ex-president Baldwin; Treasurer Platter; Councilors, Carothers, Hendershott, Keller, Updegraff, March, McClellan, Headley, Rardin and Goodman; J. H. J. Upham, chairman of the Committee on Public Policy and Legislation; J. B. Alcorn, a member of that committee, and Executive Secretary Martin.

Minutes of the meeting of October 3, 1920, were approved as published in the November issue of *The Journal*.

The report and recommendations of the Committee on Auditing and Appropriations being the first subject for consideration, this committee, through its chairman, Dr. Goodman, asked the authorization of Council in the additional appropriation of \$1,000 from the unassigned funds to make up a deficit in the appropriation for *The Journal* expenses for 1920. In explanation Dr. Goodman stated that as had been anticipated some time before, the appropriation of \$8,000 for *The Journal* during 1920 was exhausted before the payment of all the December, 1920, bills. It

was recalled that the suggested appropriation for *The Journal* for 1920 was \$10,000, and when it was reduced to \$8,000 by the Committee on Auditing and Appropriations at its January meeting in 1920, it was understood that there would be a probable deficit in this item before the end of the year. On motion by Dr. Goodman, seconded by Dr. Rardin, the appropriation of \$1,000 was made to the item of *The Journal* expenses for 1920.

In his report Dr. Goodman pointed out that his committee in the formulation of a budget for 1921 had undertaken to establish the items on such a basis as to avoid as far as possible transfers from time to time from the unassigned funds and at the same time to take into account the balance on hand at the end of the calendar year of 1920.

Dr. Goodman called attention to the fact that the one large increase recommended by his committee in the 1921 budget was for *The Journal*. In requesting an appropriation of \$12,000 for *The Journal*, he called attention to the greatly increased publication cost; for example, the December, 1920, *Journal* cost more than any other one issue yet published. Another reason for the

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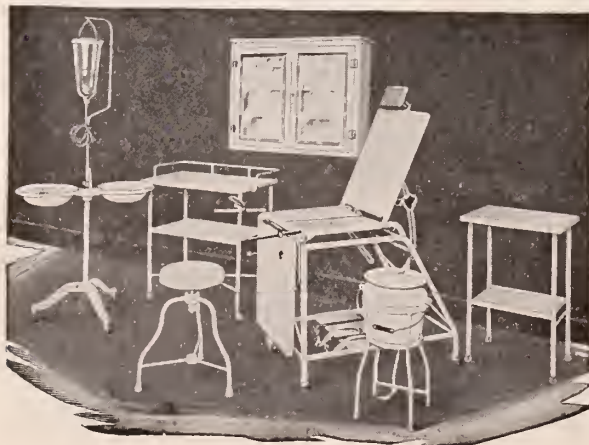
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suggested increase is the probability of an increased expenditure for office rent.

Based on this recommendation, a motion by Dr. Goodman, seconded by Dr. Keller, authorized the appointment by the president of a committee of three to secure other quarters for the Association offices, provided such a change is necessary. The committee appointed by Dr. Lukens is composed of Drs. Platter, Goodman and Baldwin.

On recommendation of the Committee on Auditing and Appropriations, Council authorized an increase in the salaries of Miss Haney and Miss Gardner, to take effect January 1, as understood and anticipated by Council at a previous meeting.

In submitting the itemized budget and recommending its adoption by Council, the Committee on Auditing and Appropriations stated its intention of carefully ascertaining expenditures and, if possible, keeping well inside the appropriations recommended. The budget as recommended, and as adopted by Council on motion by Dr. Rardin, seconded by Dr. Goodman, follows:

ESTIMATED BUDGET FOR 1921

Journal	\$12,000.00
Treasurer, salary	300.00
Executive Secretary, salary.....	5,000.00
Executive Secretary, expense.....	400.00
President, expenses	100.00
Council, expense	400.00
Annual Meeting	500.00
Medical Education	400.00
Auditing and Appropriations.....	200.00
Medical Defense	5,000.00
Stationery and Supplies	600.00
Postage and Telegraph.....	600.00

As a conclusion of the report of the Committee on Auditing and Appropriations, adopted by Council, the following statement was made:

"Council will observe that the item of Medical Defense is increased from \$3,000 to \$5,000. The committee calls attention of Council to the steadily increasing number of medical defense suits, expenses for which are being incurred, but the bills for which have not yet been received, as many of these cases now pending will not be terminated until some time during 1921.

"As in the case of other increases recommended by the Committee, it is not the intention to exhaust this item unless absolutely necessary, and it is our hope that there will be a substantial balance from this item to revert to the unassigned funds, or to be available for transfer to some other necessary expense before the end of the year."

* * *

As general chairman of the program committee for the next annual meeting Dr. Goodman presented a summary of the programs for the various sections and general sessions already submitted by the section officers up to this time. The recommendations of the officers of the medi-

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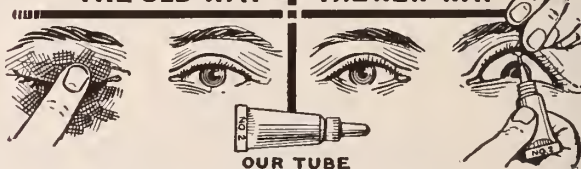
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cal and surgical section to the effect that the joint session of these two sections to be held on the third morning of the annual meeting be on the subject of fractures—medical, surgical and legal, was approved by Council and Dr. Carothers selected as a member of Council to assist in the formation of the legal section of this joint program.

To avoid a delay in submission of papers by essayists, following their presentation during the annual meeting, Council adopted a ruling requiring all essayists to submit copies of their papers to the secretaries of their respective sections before they are called on the program.

To eliminate the possibility of misunderstanding and clearly call to the attention of essayists the regulations of the Association on this point, the Executive Secretary was instructed to bring the matter to the attention of the section officers, who in turn might inform essayists of the provisions of Chapter III, Section 4, of the By-laws of the State Association, which says that "all papers read before this Association shall be its property. Each paper shall be deposited with the Executive Secretary when read. Authors shall not cause papers read before this Association to be published as original elsewhere, nor until after they have been published in the official journal of the Association." The executive secretary was also instructed to have this section published on the program for the annual meeting.

* * *

The chairman of the Committee on Public Policy and Legislation and the executive secretary presented for the consideration of Council a complete summary of legislative proposals so far anticipated for introduction in the Ohio Legislature at the present session, in any way affecting public health and medical practice.

In connection with the anesthesia problem, Dr. Baldwin as chairman of the Anesthesia Survey Committee presented a preliminary report on the result and data secured by the committee to date. On motion, the Council authorized the committee to continue its work and complete the survey.

Council instructed the Committee on Public Policy and Legislation to maintain a neutral attitude on the nurse anesthesia controversy at least until conclusion of the survey and to use its judgment later on according to future developments.

On the proposed bills for the training of nurse attendants and their registration, which had been formulated jointly by a committee of the Ohio Association of Graduate Nurses and the Committee on Public Policy and Legislation of the State Association, Council approved the preliminary proposals, with one negative vote cast by Dr. Hendershott against the proposal to register all sick attendants including practical nurses.

* * *

A report made by the executive secretary showed a paid-up membership for 1921 on December 31 of 1,984, compared with a total of 2,345 on the same date last year and compared with a total enrollment for the year 1920 of 4,788. On motion, duly seconded, Council members agreed to urge the secretaries of the county societies in their respective districts to complete the collection of dues and the enrollment of members for 1921 as soon as possible.

A medical defense report for the year 1920 showed that sixteen suits and eleven threats of suit were referred to the Association. Of the sixteen suits referred, defense in four cases was undertaken by the Association's counsel and trials in three of them are pending, while one has been dismissed in favor of the defendant physician. Eight are in the hands of private companies which are being given every aid possible by the Association. Defense in two instances was withheld because of delinquency in dues. Of seven suits held over from the year 1919, four were terminated favorably for the defendant physicians in 1920, and three are still pending.

The Executive Secretary called the attention of Council to a modification in the procedure of the Claims Department of the Industrial Commission, by which the payment of medical claims under the Workmen's Compensation Act is hastened.

FOR SALE

Fred W. Atcherson will offer for sale at public auction in the corridor of the Court House at Columbus, Ohio, on Thursday, February 10th, 1921, at 10 o'clock, A. M., a private sanatorium conducted for the care of Medical and Nervous Diseases. Property consists of a large brick residence, a frame cottage and outbuildings. Capacity twenty beds. Grounds surrounding buildings consist of about sixteen acres. Institution is located near the city of Columbus, Ohio, and has been in operation about eight years. Reason for sale,—dissolution of partnership. Appraised at \$18,000. Sale to be made to highest bidder for cash. For further information address Fred W. Atcherson, Court House, Columbus, Ohio.

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Manufacturers of

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Wassermann Test for Syphilis \$5.00
(Send 3-5 C.c. of Blood)

On every blood, I use two antigens and run two tests: the regular method and the latest and best, the ice box method, which is especially valuable when testing for cure and in cases giving doubtful reactions. This insures an accurate report.

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Bacteriologic Diagnosis and Cultures . . . \$2.00

Twenty Doses Vaccine in 2 C.c. Vials . . . 5.00

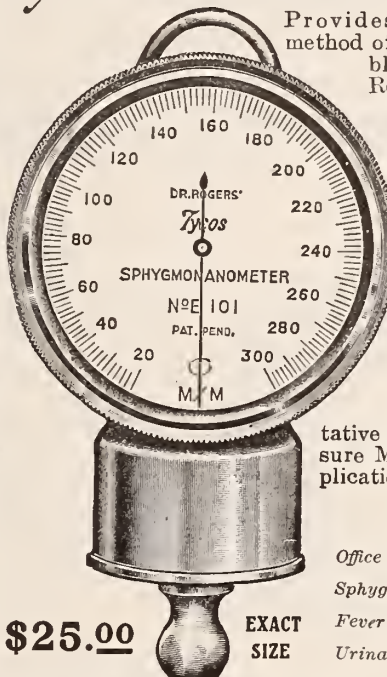
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IND. U.S.A.

This matter was explained in an editorial on page 4 of the January *Journal*.

Council adjourned to meet in Columbus on Sunday, March 6, at 1:00 p. m.

1920 Vital Statistics In Cincinnati

Cincinnati justly takes pride in the fact that the year 1920 was its banner year in health conservation. The death rate reached the low mark of 15.1 which represents a decrease of 300 deaths from the preceding year and permits of favorable comparison with the average death rate of 16.7 per thousand for the last ten years, not including the abnormal rate of 1918 marked by the prevalence of influenza.

The cumulative effect of public health work, social service and a higher standard of living, is eloquently reflected in the relatively small number of deaths from tuberculosis, 625 as compared to the annual toll of 950 in the past decade. The small number of deaths, 29 per 100,000 of the population, caused by gastro-enteritis in children under two years, is a tribute to infant care, public health nursing and the purity of the milk supply. In 1910 the rate was 103.8. The recession has been constant.

Health Commissioner Wm. H. Peters, believes the transition from specialized to general nursing was a wise step forward and augurs well for the future.

With a nucleus of the tuberculosis dispensary, which was turned over to health department by the Anti-Tuberculosis League, Cincinnati now has developed a health center containing four separate bureaus—tuberculosis, venereal disease, mouth hygiene and children's—for the benefit of those who are unable to pay for health supervision.

Small Advertisements of Interest

Resident Physician Wanted—By Kimbolton, a village of about 300 population, with no physician within 12 miles. Located on railroad, has two churches, schools, electric lights and other conveniences. Address inquiries to Mr. W. N. Leeper, Kimbolton, Ohio.

Physician Wanted—To locate in the village of Harpster, Wyandot County. Town has about 400 inhabitants; situated on Hocking Valley Railroad; has telephone system, gas line, good stores and all conveniences necessary to a small place. Several other nearby towns, including Little Sandusky and Wyandot, are also without the service of a physician, and the location at Harpster offers opportunity for a new physician to build up a good practice. Write Mr. Charles F. Kennedy, Box 84, Harpster, Ohio, for further information.

Physician Wanted—By village of Sardis and Lee Township, in Monroe County. This community, surrounded by good country, has approximately 400 inhabitants, with no physician nearer than Hannibal eight miles distant. Mr. John F. Zeh, Township Clerk and Justice of the Peace, Sardis, Ohio, will be glad to give complete information on request. He believes this to be a splendid opening for a young physician.

To Prevent Hydrophobia

Use

Pasteur Treatment

With a

Potent Product and Prompt Service
PRICE \$25.00

Order from

James McIlvaine Phillips, M. D.

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PROMPT SERVICE.

Immediate Report on Frozen Sections of all Tumors.

CALCREOSE

Tuberculosis

For more than twenty years Dr. Beverly Robinson of New York has been using and praising the use of creosote in the treatment of pulmonary tuberculosis. It acts as an intestinal antiseptic. Part of the creosote will be excreted by the lungs, inhibiting the growth of secondary infections micro-organisms, and in so much certainly acts for good in pulmonary tuberculosis. Handbook of Therapy, Ed. 3 The Journal A. M. A., pp. 186-187.

CALCREOSE is a mixture containing in loose chemical combination, approximately equal parts of creosote and lime. CALCREOSE has all of the pharmacologic activity of creosote, but does not cause any untoward effect on the gastro-intestinal tract. CALCREOSE may be taken in comparatively large doses—in tablet form or in solution—without any disagreeable by-effects; therefore it is particularly suitable for the treatment of these patients.

Write for samples and literature.

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Our various shops, efficiently organized on a basis of

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are nowhere surpassed in equipment for grinding lenses, assembling the necessary fittings and for producing the spectacles indicated by the oculist. Our shop methods are in accordance with the most advanced scientific practice.

The White-Haines Optical Co.

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Smallpox Situation Considered Serious

Smallpox conditions similar to those which preceded the epidemic of 1917, the greatest outbreak in recent years in Ohio, existed in the state in January, according to a review of the situation appearing in the current number of *The Ohio Public Health Journal*, monthly organ of the State Department of Health.

A moderately high peak in the spring, followed by a drop during the summer months and a sudden sharp rise in the fall have marked both 1917 and 1920, statistics of smallpox prevalence show. In 1917 the disease continued to spread until a record month's total was registered in January, 1918, when 2,111 cases were reported.

The smallpox epidemic of 1917-1918 caused 11,000 cases of sickness and fourteen deaths, and cost the state more than a million dollars, according to estimates made at the time by health department statisticians. More than 900 cases of smallpox were reported in November of this year—a higher total than in November, 1917.

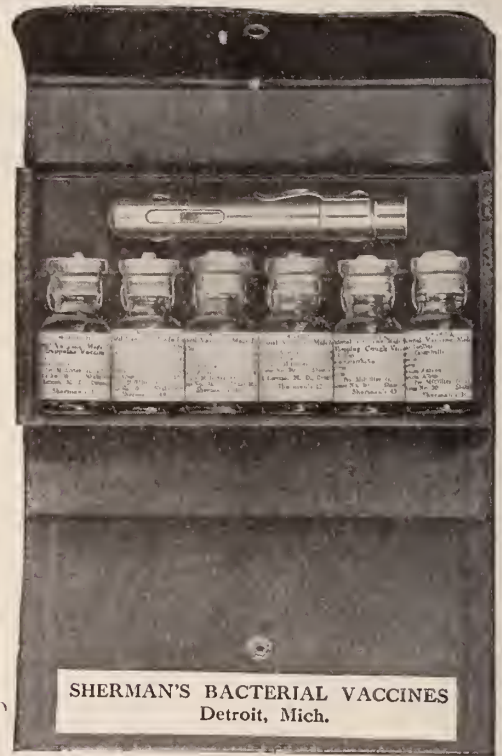
"There is no real ground for argument as to the efficiency of vaccination in preventing smallpox," declares another article in the same number of *The Ohio Public Health Journal*. The marked drop in smallpox prevalence throughout the world, after the discovery of vaccination in 1798, and the quick stamping out of the disease in the British Isles following the adoption of a compulsory vaccination law are cited in support of vaccination.

"The only systematic method of securing general vaccination in the states of the union is by vaccination of school children," declares the health department article. "Once this practice is abandoned the general immunity would soon fall below the safety line. In some parts of the country the danger point has been reached already and introduction of a virulent strain of smallpox would probably give rise to a widespread epidemic of a most virulent and fatal type of the disease."

Anti-vaccinationists are declared to "enjoy immunity from smallpox because most of the people still believe in vaccination and protect themselves, and incidentally protect their skeptical neighbors."

"The State Department of Health," the article concludes, "cannot undertake to guarantee to protect the people of the state against serious epidemics of virulent smallpox, unless the mass immunity of the population is kept at a reasonably high point by general vaccination. It has been abundantly proved that even the most efficient and energetic efforts at quarantine and isolation cannot control the disease in an unvaccinated population."

A new leaflet containing a full discussion of vaccination as a preventive of smallpox was issued by the State Department of Health in January for general distribution to the public.



Dares Haemoglobinometer

Candle lighted, or Electric lighted.
We are accepting orders for prompt delivery.
Write for booklet and prices.

Tycos Office Sphygmomanometer

With 6 inch silvered dial.
A distinct advance over the pocket type.
Immediate delivery. Price \$37.50.

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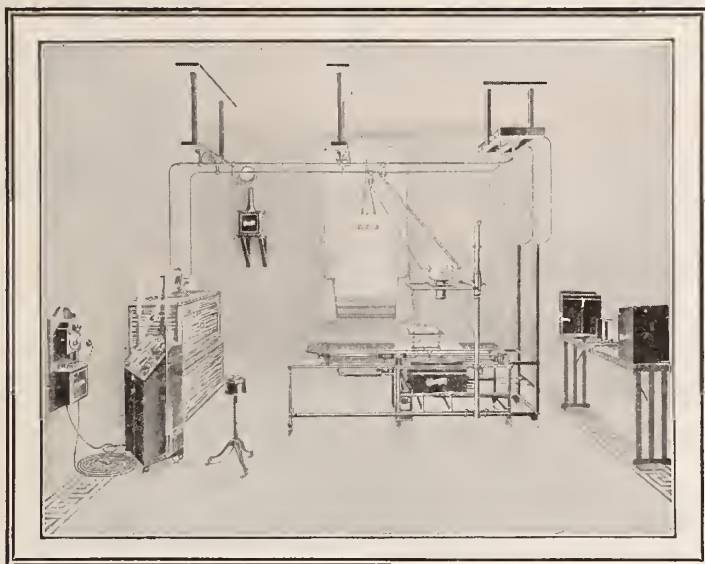
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NEWS NOTES OF OHIO

Cleveland—Dr. and Mrs. J. M. Moore of this city are spending the winter in Florida.

Bellefontaine—Dr. David P. Young, formerly of New London, has located in the office of the late Dr. J. H. Wilson in this city.

Caldwell—Dr. John L. Gray is convalescing from the results of a fall on an icy pavement in late December, from which he suffered three broken ribs and a sprained back.

Marion—Dr. Bret B. Hurd, a former practitioner of Caledonia, opened offices in Marion recently following his discharge from army service covering a period of more than three years.

Greenville—The marriage of Dr. A. F. Sarver, secretary of the Darke County Medical Society, and Miss Hazel Arens was solemnized December 28.

Cincinnati—Dr. Roger S. Morris has resumed his position on the staff of the Medical College of the University of Cincinnati and at the General Hospital, following a year's leave of absence obtained after discharge from military service.

Toledo—Dr. James H. Smith, recently of the staff of Coney Island Hospital, New York, has located in Toledo. Dr. Smith served as a lieutenant commander in the Navy during the war.

Fremont—Sandusky County Medical Society has placed in Memorial Hospital, this city, a bronze tablet in commemoration of the late Dr. Martin Stamm, founder of the society. The tablet shows a life-sized head and shoulder likeness of Dr. Stamm in bas-relief.

Fort Recovery—Dr. Eugene F. McLaughlin, at one time a resident of this village, died in Chicago recently.

Ashland—Dr. George W. Jacoby, for six years a practitioner in this city, has moved to New London, where he is associated in practice with Dr. Maurice E. Roasberry.

Tuscarawas—Dr. C. J. Miller of Akron has purchased the practice of Dr. G. A. Henry, for 21 years a resident of this village.

Cincinnati—"The Psychopathic Child" was the subject of a lecture delivered by Dr. Edmund M. Baehr before a recent meeting of the Cincinnati Women's Club.

Marion—Dr. F. Young of Marion spent the month of January in post-graduate study in New York.

Ansonia—Dr. M. M. Corwin miraculously escaped with a few cuts and bruises when his machine was struck by a passenger train here, recently. The machine was hurled 20 feet and badly wrecked.

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Overcome in many respects by

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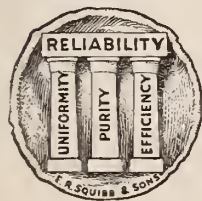
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ELIXIR ENZYMES is a palatable preparation of the proteolytic and curdling ferments that act in acid medium. It is recommended as an aid to digestion and as a gastric tonic generally.

Elixir of Enzymes is of special service in correcting faulty proteid metabolism which is one of the principal causes of autointoxication.

Elixir of Enzymes is an excellent adjuvant and vehicle for exhibiting iodids, bromids, salicylates and other drugs that disturb the digestive functions. One dram of Elixir Enzymes will carry 46 grains of potassium iodid or 45 grains of sodium salicylate or 17 grains of potassium bromid.

Elixir of Enzymes contains the curdling ferment and may be used for making junket or curds and whey. Add one teaspoonful of the Elixir to half pint of lukewarm milk, stir thoroughly and let stand till cool.

For minimizing the organic disturbances and eliminating the corrosive effect of potassium iodid on the mucous membrane of the stomach as well as disguising the taste, the following combination is recommended:

Potassium Iodid, 2 ounces.

Distilled water, enough to make two fluid ounces.

To exhibit, for instance, 20 grains of potassium iodid three times daily, use one teaspoonful of Elixir of Enzymes, one teaspoonful of the above solution to half pint of lukewarm milk; stir thoroughly and let stand until cool. Take one-third of this quantity as a dose. This junket should be made up fresh every morning.

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McCONNELLSVILLE, OHIO

A private institution for the treatment of
Pulmonary Tuberculosis
and Laryngial

The sanatorium is located at McConnelsville, Ohio (a town of 3000) upon a beautiful high hill, with picturesque surroundings, and a pleasant environment. It is built on the cottage plan, (each patient having either an individual cottage or a cottage with a sleeping porch for two) and equipped for the scientific diagnosis and treatment of pulmonary and laryngeal tuberculosis.

The cottages have all modern conveniences, such as individual call bells, hot and cold running water in each cottage, electric lights, and a very adequate supply of furniture.

Climate means nothing in the treatment of pulmonary tuberculosis, so why send your patients west? The climate in Ohio is as good as any. The cardinal points of REST, FRESH AIR, PROPER FOOD, AND REGULATED EXERCISE is the method of treatment used.

CLOSE PERSONAL ATTENTION IS THE MOTTO OF THE INSTITUTION.

Success in the treatment depends upon the stage of the disease at which the patient is admitted to the institution. The sanatorium acts as a "school" where patients are taught to live properly and to protect others. They also learn the value of rest. By giving your patient a short period of "schooling" he will be better prepared to follow instructions and will have increased his chances of arrestment of his disease.

When in doubt as to diagnosis, we will admit the case for observation and report.

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ARTIFICIAL PNEUMOTHORAX TREATMENT AND TUBERCULIN WHEN INDICATED.

RATES, \$28.00 per week, which includes everything except an X-ray examination, which is made on admission.

Descriptive circular and other information on request.

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DR. LOUIS MARK, Medical Director, Rocky Glen Sanatorium, McConnelsville, Ohio

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Issued under the direction of the Publication Committee.

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Next Annual Meeting May 3-5, Columbus

EDITORIAL COMMENT

by D. K. M.

First Call! Annual Meeting!

The Seventy-fifth Annual Meeting of the State Association in Columbus on May 3, 4 and 5, is only two months ahead, and it is quite time to begin making your plans to attend. Columbus, centrally located in the state, always draws a large attendance, and with every indication of an unusually fine session, the registration at the coming meeting promises to surpass any in previous years.

A few advance tips on the contents of the complete program which will be published in the April issue of *The Journal* will convince the most sceptical that this is going to be a real meeting. Briefly, there will be two general sessions, two sessions of the House of Delegates, scientific sessions, a smoker, banquet, golf tournament and numerous other entertainment features.

The local entertainment committee has not announced the name of the speaker at the annual banquet, but promise is given that it will be someone of national repute whom every physician will enjoy hearing. Contrary to the custom followed during the past two years, there will be no serious address at the smoker but the program for that occasion also will be given over to the lighter forms of entertainment.

Widespread interest centers in the announcement that Dr. Joseph Rilus Eastman, professor of surgery, University of Indiana School of Medicine, will deliver the oration on surgery, and Dr. Reuben Peterson, professor of obstetrics, University of Michigan, will deliver the oration on obstetrics, at the second general session. Dr. Eastman, well-known for his surgical ability and original research work, was a surgeon in the Austrian Army before United States entered the war and saw extensive service on the Russian front. Dr. Peterson is a nationally known obstetrician. Interest in their appearance is augmented by fact that both orations will be designed to appeal more to the general practitioner than to the specialist.

As in previous years, each of the seven scientific sections will have two sessions, and in addition to these the Medical and Surgical Sections will have a joint session on the final morning of the meeting, when the program will be given to the consideration of fractures, from the medical, surgical and legal viewpoints.

Aside from the usual program of excellent papers the scientific sections will have many special features. Lieutenant-Colonel Henry Smith of India, who will deliver the special oration on ophthalmology before the Eye, Ear, Nose and Throat Section, and whose wonderful work abroad is described elsewhere in this issue, will hold an eye clinic at one of the local hospitals on

the second day of the meeting. Admission to this clinic will be by ticket only and those desiring to attend should communicate with Dr. Andrew Timberman, Citizens Savings and Trust Building, Columbus.

Dr. Hugh Baldwin, secretary of the Section on Dermatology, Proctology and Genito-Urinary Surgery, announces that a skin clinic will be held in connection with the sessions of his section. The clinic will be conducted under the leadership of Dr. Charles J. Shepard of Columbus, with the cooperative study of other dermatologists in attendance. Any physician having an unusual case, or one of doubtful diagnosis, is requested to correspond with Dr. Shepard, 289 East State Street, Columbus, who will make arrangements for the appearance of patients at the clinic. If necessary funds will be provided for their transportation.

In addition to the above features there will be elaborate scientific and commercial exhibits. The State Department of Health, the Ohio Commission for the Blind and other state departments are preparing special exhibits which will be of great interest to physicians and guests at the meeting. Dr. Hugh J. Means, 322 East State Street, Columbus, of the scientific section of the Exhibit Committee, will be glad to hear from any member of the Association having interesting photographs or specimens he would like to show.

The Annual Meeting should occupy a big place in the doctor's life. For all who attend it is a three-day post-graduate school in which he may become acquainted with the new scientific advances and social and economic problems of medicine. For many it is the only respite taken from strenuous professional duties and serves as a vacation and time for renewing old friendships. Take advantage of the coming meeting—May 3, 4 and 5.

Your 1921 Card

Several hundred members of the State Association have neglected the fundamental routine in securing their membership cards for 1921 through payment of dues to the secretary-treasurers of their respective county societies.

It should be and is unnecessary to reiterate from time to time the value and necessity of "good standing" in your medical society. You are well aware of the value of organization affiliation with your fellow practitioners. There never was a time when the needs for harmonious medical activities were as great as at present.

Needless to say unpaid members, during their delinquency, are denied the benefit of medical defense in civil malpractice suits, and numerous other advantages. This *Journal* which is your mutual medium of expression and information on all matters scientific, social and economic directly affecting you every day, will not be sent to delinquent members after this issue.

For your own sake in advantages, benefits and

privileges, for the sake of the medical profession itself, please remit your dues for 1921 to your local county secretary NOW.

Developments at State House

A composite picture of the legislative situation in Ohio since the publication of the preceding issue of *The Journal* presents a background consisting primarily of taxation problems mingled with a general scheme of re-organization of administrative functions in the state government. In the foreground are to be found pending bills of great variety on suppression of crime and labor proposals.

Following the enactment by both branches of the assembly of the prohibition enforcement bill, with emergency clause, and its signature by the governor is a proposal not introduced at the time this was written, to eliminate in a large measure patent medicines of the so-called "tonic" type, manufactured and dispensed for beverage purposes. It may be properly and correctly assumed that such so-called "medicines" for which the demand has increased since national prohibition became effective and which contain a proportion of alcohol, should be looked on with suspicion, by all those interested in the direct purpose of prohibition. If such a measure is properly drawn, it should be passed by all means.

It being the avowed intention of legislative leaders to act upon as few measures as possible in addition to those of fundamental importance looking toward an early adjournment, it does not seem likely that much radical legislation will be countenanced. It is stated on good authority, however, that there will be a bill introduced on compulsory health insurance or state medicine. At any rate, the American Association for Labor Legislation has been "on the job" as indicated by proposals on "minimum wage", "old age pensions" and others. In spite of the fact that 27 so-called labor bills had been introduced up to the middle of February, none of these had been passed at that time. These include all sorts of safety appliance proposals, a bill to provide a bureau of electrical inspection, another to license plumbers and sewer tappers, and similar measures intended to further the interests of organized labor in its contact with state government, and in the supervision of administrative functions.

The first indication of an effort to tamper with the Hughes-Griswold Health Act is found in a measure (Senate Bill No. 92) which would confine the salaries of district health commissioners to \$1200 a year in all counties or general districts of 25,000 population or less. This proposal was introduced by the same senator who late in the last session introduced a bill to repeal the entire Hughes Health Act, prior to the amendments under the Griswold Act. This fact may be

significant, although it is not believed that formidable support can be organized in any effort to otherwise seriously cripple the present health laws.

One of the measures in which the State Association is directly interested is House Bill No. 133 now pending to provide a minimum amount of physical education in all the schools of Ohio. In addition to promoting the physical wellbeing of the younger generation, this measure if enacted should result in a clearer understanding by school children of the necessity and value of competent medical service for the correction of physical ailments, and should go a long way toward convincing the younger generation of the fallacies of the methods of "cults" and "limited" practitioners.

The general plan for the reorganization of state departments is of direct interest to the medical profession, and the state Committee on Public Policy has been closely watching the developments on this issue. In spite of the fact that the general plan suggested by the governor and approved by the reorganization committees of the House and Senate, provides for ten main departments and three commissions, including a "department of registration," there was no indication that it was the intention of the administration to interfere with the present licensing function as administered by the State Medical Board.

The medical profession as well as allied professions apparently feel that the present functions and executive jurisdiction of the licensing boards should be retained as at present, and that a system similar to that in Illinois which has caused so much friction and dissension, should not be contemplated in the administration code.

With a number of proposals affecting the operation of the workmen's compensation law, the proposal to include occupational diseases under the benefits of that act, is of interest to the medical profession. This measure (House Bill No. 47) is now pending, and it has been the purpose of the Policy Committee in conjunction with other groups interested, to safeguard this measure from generalities and indefiniteness.

As forecast, the bill to exempt Christian Science healers from the provisions of the Medical Practice Act was introduced in the House of Representatives on February 15. This is House Bill No. 192 and the author is Representative Morris, a Christian Scientist, who introduced a similar proposal last session. The policy of the State Association on this issue remains the same as adopted two years ago. The responsibility rests squarely with the legislature if it chooses to legalize a practice which attempts to treat bodily afflictions through prayer alone, and

which considers disease to be a "mental error." In addition to the health menace underlying such a conception, it is improbable that legislators of different religious beliefs would desire to recognize on behalf of the state a distinction between religious doctrines.

Up to the time this summary was written there had been no measures introduced on nurse legislation, although no less than a half dozen dealing with various phases of the situation were being considered by numerous groups interested in the problem. It seemed probable that some measure intended to meet the shortage of nurses would be introduced to provide for "nurse attendants." The anticipated "repealer" to the nurse anesthesia legislation now on the statute books had not made its appearance up to February 15, although considerable comment on the subject had been heard and a number of constituent societies of the State Association have adopted resolutions favoring such action, as evidenced by the official proceedings of county societies published elsewhere in this issue.

The committee authorized by Council of the State Association some time ago to conduct an investigation of the whole subject of anesthesia has made progress but has not completed its report, and the Policy Committee up to this time has adhered to its neutral position.

The medical profession of Lucas County, joining with other organizations in Toledo, sponsored two proposals (House Bill No. 130 and House Bill No. 131) calling for exchange of telephone service between competing companies, providing for the receiving and transmission of messages between subscribers to each of two or more companies and for suitable and adequate connections and exchanges for this purpose; and permitting the merging of competing companies for the purpose of forming continuous lines or systems, and consolidating into single corporations. The idea as expressed by the proponents is to remove the inconvenient delays and annoyances of two non-communicating telephone systems.

Other pending measures were those dealing with state institutions, one to provide a site for the feeble-minded institution on the Orient farm in Pickaway county instead of the site in Crawford County previously selected by the State Board of Administration, with the possibility of cutting down the appropriation of \$650,000 made last session for the purpose of such an institution. Other reference on this subject will be found under "hospital notes" elsewhere in this issue.

Following a public hearing on the initiated chiropractic bill (House Bill No. 13) on the evening of February 1, at which time the proponents staged an obvious gallery support for this

pernicious proposal, which did not deceive members of the committee or the legislators present, the public health committee of the House, to which the bill had been referred and before which the hearing was held, agreed upon a report to the legislature "for indefinite postponement." With the adoption of this committee report on February 15 this obnoxious measure is "dead" at least for the time being, as far as action of the legislature is concerned.

It is, however, the avowed intention of the chiropractors to attempt the enactment of a similar proposal which they claim will overcome the defects in the initiated bill. Sounds like curing the incurable or reviving the dead, what?

As indicated by the chiropractic member of the legislator and his misguided co-workers who attempted to have the bill amended, it is shown conclusively that the fundamental purpose of those backing the bill is to license the 200-odd chiropractors who have been practicing in this state in defiance to the law.

In Re Subsidation

In reference to the Sheppard-Towner maternity bill and general measures pending in Congress, to provide federal state aid in the furtherance of welfare measures, John J. Blaine, newly elected governor of Wisconsin says:

"The federal government is undermining the powers of the state by 'species of bribery.' 'The species of bribery' to which I refer consists of legislation by the federal government in making an appropriation for some purpose under conditions that the State meet the appropriation with a like amount. Some of the purposes are, no doubt, desirable, but to my mind in many cases the state might better afford to embark upon a similar undertaking independently, and by foregoing the appropriation made by the federal government actually carry out the same project more economically."

"Choosing a Family Physician"

A frank expression of mutual problems is often the groundwork for common understanding and mutual cooperation. It is interesting to observe that industrial leaders and publications devoted to manufacturing are constantly giving more attention to health problems.

Industrial physicians deserve a large share of credit in making the proper contact between industry and the medical profession. Most industrial physicians are attempting constantly to interpret the economic and social values of medicine to industrial workers, educating them to the more frequent use of physicians and specialists, and particularly teaching the workmen to use a higher type of physician and to avoid quack remedies and advertising charlatans.

Instead of interfering with the legitimate field of private practice, the industrial physician

through his efforts in an educational way with industrial workers, emphasizes the importance of both the general practitioner and the specialist.

A recent issue of *The Employees' Service News*, published by the Cincinnati Milling Machine Company, contains an interesting article on the subject of "Choosing a Family Physician." Primarily for the purpose of indicating the possibility of cooperation between the physician in private practice and the industrial physician, this article is here reproduced:

"Perhaps one of the most important decisions affecting the health and happiness of a man and his family is when he selects his family physician. It is somewhat difficult for a layman to determine the efficiency of a physician, but perhaps some fair conclusion may be reached from observing the methods used by a doctor when he attends you or the sick members of your family.

"You are primarily interested in being sure that he has taken the trouble, and is able, to make a diagnosis. In other words, he can not treat your condition unless he knows what ails you. He can only find out what is the matter with you by questioning you as to your symptoms and then making a careful physical examination.

"For example, a doctor can not tell you that you have Bright's Disease unless he has made repeated chemical examinations of the urine and has followed that up by a microscopic examination. He must also know the quantity passed in twenty-four hours, he must have carefully examined the heart, taken blood pressure readings, and so on.

"In this same way, the first-class physician will not tell you that you have tuberculosis unless he has made very careful and repeated examinations of your chest, stripping you to the waist; unless he has had the sputum examined microscopically, reaching the final decision as to the extent of the disease by having an X-ray picture made of your lungs. Especially in beginning tuberculosis will it be necessary for him to have your temperature carefully recorded twice a day over a period of a week or more.

"Sickness should not be a matter of guesswork. There is no physician so smart but that he must use the instruments of precision which science has proved to be necessary for a diagnosis. Being a doctor doesn't make him a mind reader.

"The most successful physicians are those who use their stethoscopes and thermometers frequently, who carefully examine your child physically, who inspect the throat, who take cultures of the throat when that part is affected, who look for adenoids and tonsils and bad teeth when your child's physical development is not progressing normally. Such a doctor carefully inquires from the mother about the child's habits, its food, what it drinks, how it sleeps, and how it gets along in school.

"What you are interested in above all things is

(Continued on page 208)

Juvenile Psychosis*

H. H. Drysdale, M. D., Cleveland

Editor's Note.—The attitude of the laity in resenting the very suggestion of psychosis in childhood and the effort of certain practitioners to spare family feelings by designating insanity as nervous exhaustion or brain fever, has done much to delay the campaign of mental prophylaxis. Few, if any, adults manifesting mental derangement later in life, have been altogether free from similar attacks during the earlier periods of life, although they may have escaped diagnosis. More intensive investigation is disclosing that the incidence of juvenile psychosis is becoming more and more frequent and that every effort on the part of all concerned will be needed to meet and solve the problems involved. If the medical care with which we are trying to surround children during their period of development is to be entirely successful it must include the co-operation of every agency that can in any way spare these children from a mental breakdown due to inherited or acquired tendencies to psychosis.

MEDICALLY, it may be said that we live in an age of prevention and today thoughtful people throughout the world are giving earnest attention to the problem of child hygiene. It is true that physical hygiene has advanced much more rapidly than mental hygiene and this is readily explained by the fact that little or no neuro-psychiatry is taught in many medical colleges. Furthermore mental hygiene, until recently, has been obstructed by certain internists who have persisted in subordinating the disturbances of the psychism to those of the physical and have denied mental sufferers the consideration they legitimately deserved.

But medicine like everything else is changing and a more democratic view point prevails. The public interest is aroused as a result of the great war which has amply demonstrated that the mind of the nation is not being well cared for and is showing the effects of misuse. All of this undoubtedly will tend to raise mental hygiene to the level of physical hygiene so that soundness of mind will be concomitant with soundness of body.

THE CAMPAIGN OF MENTAL PROPHYLAXIS

Hospital records, both civil and military, show an increasing number of badly balanced individuals and it is an open secret that insanity is steadily advancing. If this be true, and who will deny it, mental hygiene has a most vital function to perform. It already has assumed the responsibility by inaugurating a national campaign of mental prophylaxis. It has adopted the medical view that mental patients are ill; that many of the causes of physical disease also disintegrate and destroy mental health; that the insane, so-called, are sick of a malady, which in the early stage of many of its forms is curable and that such persons should be as humanely and considerately cared for as other sick individuals and on a similar basis. With these facts before us it is self evident that the realm of childhood furnishes the greatest opportunity for the application of preventive measures.

INCIDENCE OF JUVENILE PSYCHOSIS

According to the literature on the subject,

mental afflictions developing in youth are regarded as relatively rare. Statistics published by Spitka indicate that one in 70,694 children annually lose their reason. Today, these figures carry little, if any weight, because it is the common experience of neuro-psychiatrists that the condition is very much more prevalent than is usually conceded. Unfortunately the laity resents the very suggestion of *insanity* and as a consequence, a psychosis occurring in childhood, is apt to be designated an attack of *nervous exhaustion*, *brain fever* or some kindred disorder. To meet this hyper-sensitiveness, many physicians have deemed it expedient to apply a more gentle terminology. Then again there are undoubtedly a considerable number of cases that have been wrongly interpreted by inexperienced observers.

In tracing the life history of adult mental sufferers it has been my observation, time and time again, that the individual in question had during youth, suffered a similar attack, though of a milder nature, and careful inquiry has elicited the interesting information that the former disturbance was characterized by unmistakable mental manifestations.

Many superintendents of state hospitals, to whom I have spoken in this regard, admitted having treated or observed insane children but most of these cases are unknown to medical literature. Furthermore during my affiliation with the State Board of Charities, several instances of children, afflicted with an unmistakable psychosis, that had been committed to an institution for the feeble-minded were brought to my attention. I venture to say that fully 10 per cent. of the inmates of feeble-minded institutions are mental patients. These cases belong largely to the group of early developing dementia praecox. All of you surely, have made the same observation and some of you more than likely have detected cases of juvenile paresis among your patient population.

In the eleventh volume of the census of England and Wales, it is reported that the largest percentage increase in the insanity-rate occurred in the case of children under fifteen years of age and if the actual facts were available they probably would show a similar state of affairs in the United States.

*Read before a meeting of the American Association for the Study of the Feeble-minded, Cleveland, June 4, 1920.

It therefore seems to me that the number of children who suffer mental disaster is very much larger than the perusal of modern statistics would indicate, owing to the fact that a great percentage of cases are not being reported.

EARLY OCCURRENCE OF PSYCHOSES

Insanity in childhood may occur in the very young if we credit the case reported by Greeding of a child that was a raving maniac at birth. Sachs, however, intimates that this story should be taken with a grain of salt and I dare say that most of us will entertain the same impression.

As far back as 1750, Berkham reported a case of melancholia in a girl aged 11. Attacks of mania were observed by Rush in a child of 2 years; by Liebers in a boy aged 5, and Sinkler noted a similar outbreak in a child of 3 years. Paul Rasmus reported an acute psychosis in a child of 1 year and 9 months. M. S. Gregory published a case of maniac-depressive insanity in a girl of 10. Eminghaus collected a series of 199 cases of juvenile psychoses, 24 being afflicted with melancholia.

In our records we have full notes of forty-eight (48) cases of insanity of childhood. Twenty-nine (29) were girls; nineteen (19) were boys. Thirty-seven (37) gave indisputable evidence of inherited predisposition. All of these patients were American born. The youngest was a lad aged 11; the oldest a girl approaching her seventeenth birthday. Twenty of the cases, (14 boys and 6 girls) developed acute mania. Six of these were attributable to chorea. Five resulted as a complication of influenza. In two instances, the mental disturbance followed severe head injury. A full recovery was obtained in both patients. Five children, three of whom were considered exceedingly brilliant and two as precocious, became acutely maniacal as a consequence of intellectual over-pressure. One girl, aged 16, during the convalescent stage of chorea, suddenly lost her reason, became unmanageable and boisterous and died ten days thereafter of cardiac dilatation. One girl and one boy developed violent maniacal symptoms as a result of rheumatism. A girl, aged 17, became maniacal during a mild attack of influenza and recovered. Five years afterward she was the victim of a maniac-depressive psychosis following the birth of her first child. A precocious lad, age 12, recovered from an acute mania but has since developed two attacks of chorea.

Twenty-eight of our cases were classified as dementia praecox and this diagnosis was finally confirmed in all, except the case of a girl, aged 12, who while under observation, developed interstitial keratitis. A Wassermann test proved 4 plus with increased spinal cell count. Previously she had been silly, stupid, indifferent and unable to look after herself. Her father died at the age of 36, from causes unknown. Serologic examination of her mother also proved positive. The condition was then regarded as inherited lues and under

anti-specific therapy the mental defect subsided. Dementia praecox was suspected by a wide-awake teacher of defectives, in a backward boy age 13, and her observation proved to be correct.

Eleven cases of dementia praecox gradually showed an almost complete subsidence of mental symptoms for periods of from seven months to two years. All suffered recurrences, however, and have deteriorated rapidly. Two of these patients were accepted for service in the army of the United States and both were discharged as mental invalids. One returned from France with marked catatonic manifestations. One dementia praecox patient attempted self-destruction by jumping from a window but escaped with a fractured arm. Four cases succumbed to pulmonary tuberculosis. In our experience the prognosis of early developing dementia praecox is extremely unfavorable.

THE SYMPTOMATOLOGY OF JUVENILE PSYCHOSIS

The symptomatology of juvenile psychosis apparently does not differ much from the malady occurring in adult life. In early years susceptible children may become victims of hallucinations, as their sense impressions are deep and lasting. But the youthful mind cannot ordinarily construct systematized delusive conceptions such as we find in the adult because the child's knowledge does not extend beyond his limited experience and the large complicated problems of life are unknown to him. In one case, however, actual delusions of persecution were noted in a precocious boy aged 14, who entertained the conviction that his parents were attempting to poison him. For several days he refused nourishment that came from his mother's hands.

The majority of psychic abnormalities in childhood are of the maniacal type. There is marked impulsivity, boisterous hilarity, psycho-motor unrest, insomnia, and various hallucinatory phenomena. Some lose weight rapidly due to their refusal to eat.

Dementia praecox developing early is usually ushered in with listlessness, indifference, stupidity, and terrifying fears. Some present signs of depression and the disturbance may be interpreted as melancholia. Patients of this type, if seen after the malady has progressed considerably, may be diagnosed as feeble-mindedness. States of depression appearing in childhood are invariably suspicious of an oncoming dementia praecox. Juvenile paresis is also liable to be classified as congenital mental enfeeblement as the child is dull, does not progress at school and exhibits many of the symptoms of arrest of mental development. The physical signs plus a reliable Wassermann test will usually make the differentiation.

INHERITED AND ACQUIRED PSYCHOSIS

In all the cases that have been reported a faulty inheritance stands out as the most potent cause of these distressing conditions. Un-

fortunately we are not all born equal, although we have a right to be, and many come into the world handicapped with traits, tendencies and defects which seriously impair their power of adjustment and deprive them of the facility of combating strains and stress. Others, in addition to a vicious heritage, have the still greater misfortune of being exposed to unwholesome environmental influences which accentuate their inherent weaknesses.

Of the acquired psychoses, traumatism of the head, physical diseases and intellectual overpressure of delicately balanced children are accorded first causes. Chorea, influenza, rheumatism and other infectious disorders, profound emotional uprisings, prolonged fatigue, harmful early impressions, depraved and unfavorable home surroundings, inadequate nutrition, cruelty, morbid religious training, strenuous mental contests, uncurbed petulency, evil-doing, sorrow, remorse, et cetera, must be reckoned with in the etiology of these tragic mental catastrophes.

Depraved habits can hardly be termed a true causative factor, but I am firmly convinced that when practised to excess they do exert a most baneful influence on the mentality of sensitive youths and are indeed, the means oftentimes of precipitating states of remorse, depression and timidity which are at least antagonistic to full mental vigor.

I am frank to say in this connection that the significance of abnormal habits and other perverted tendencies occurring among children are not receiving the attention they deserve. The voluntary appeals of several otherwise promising boys—and girls too for that matter—who found themselves in the throes of uncontrollable, vicious practises, has frequently set me thinking. Prudery more than anything else has prompted many physicians to side-track these faults but there is no denying the fact that unnatural habits are demoralizing to psychic health and are very apt to encourage a state of fatigue which after all, is the first step taken by the nervously unstable, towards mental disaster.

MENTAL PROPHYLAXIS

The maintenance of mental health therefore is an important desideratum. Nor is the problem a hopeless one, even among the predisposed, as fully 50 per cent. of the cases of disorganized mentation are preventable. If this is so and in order to successfully apply the principles of mind hygiene it is expedient and highly necessary for those who have the care, training and education of children, to not only appreciate the fundamental relations of body and mind as revealed by physiology and psychology but be prepared to promptly interpret danger signals in their incipency.

Few people realize what a terrible calamity the breaking of mental health actually means, largely because most individuals have given the matter very little serious thought. If you pause

and consider for a moment what permanent mental incapacitation means, you will agree that death itself is relegated to a minor position by comparison.

If the minds of children then are to be properly developed and permitted to prosper by a wholesome, efficient and healthful environment, supported by a well regulated home atmosphere and above all that the physical condition be kept at the high point of stability and resistance.

Of the educational factors that hamper mental growth may be mentioned defective sanitation of the school buildings, improper arrangement and equipment of the school rooms, the maintenance of too many children of different grades in one room and faulty teaching methods. Defective heating and ventilation plus inefficient illumination are also harmful in no small degree.

The family and home environment also exercises a forceful role in mental hygiene. The sort of mental training the child receives during the first six or seven years of its life may taint or tarnish its entire future. Children with bad heredity require more watchful and careful instruction than those with a substantial heritage. Too often the hyper-sensitive child is misunderstood and the personal attitude of the parents is not infrequently harmful. The child that is instructed sanely is unlikely to fall a prey to haunting fears, because it develops a rational, instead of a superstitious trend of mind—an attitude that tends to keep the ship of mentality on an even keel even in the roughest waters. Children are too often pampered and abnormal tendencies are permitted to go on unheeded until they precipitate grave mental consequences. This especially happens to high-strung, nervously excitable youngsters when one or both of the parents are neurotic, unstable or lacking in strength or character. It is well to remember that mild forms of abnormality are apt to crystallize into faulty and health-wrecking habits which eventually may prove destructive.

Habits of thought established in childhood shapen the child's future mental attitude. Industry, either in work or play, should be stimulated to become a fixed habit. Once it is established it tends to persist throughout life. Idleness is the handmaiden of indecision. Idleness generates indecision. The child that shows a tendency to wavering should be taught tactfully to make decisions and abide by them. It is good mental discipline to acquire the habit of making some decision even though it be a poor one. If the child is physically puny and nervous, but mentally bright and alert, its future mental vigor will best be conserved by devoting more time to the development of its body and central nervous system. Many a brilliant future has been jeopardized by failure to observe this truth. Teachers and parents in their enthusiasm to obtain a brilliant showing have driven a precocious child far beyond its limitations and many a sub-

sequent mental break is traceable to this source. An attempt to hold the precocious child's mind to the normal channels of childhood will prove much more beneficial than encouraging it to run off on peculiar tangents. The especially brilliant mind is not always the one that most successfully withstands the physical and mental strains incident to a successful practical career.

Then again children with weakened concentrative and perceptive acuity require extreme patience on the part of their teachers. Such pupils do not grasp impressions as sharply as those otherwise endowed but when they finally do take root they tend to stick with remarkable and persistent tenacity. Highly organized children should not as a rule be encouraged to indulge in strenuous mental contests such as striving for prizes, et cetera. The reaction from such experiences often gives rise to troublesome nervous manifestations and may result in a severe degree of fatigue. When such contests are permitted, the effect on the child's mind and nervous system should be carefully noted by the parents.

It frequently happens that the training of children is left to nurse-maids and companions, many of whom are improperly equipped, intellectually or temperamentally, for this important service. In time it tends to retard initiative and precipitate timidity.

A SOUND MIND IN A SOUND BODY

The value of the playground is also recognized as a significant feature of mental hygiene. Indeed it may be said that for perfect health a proper balance between work and play is indispensable. The playground is the builder of character. It is a sort of levelling process for the bumptious youngster and equally helpful to the intelligent but timid child by teaching confidence and self-assurance.

Various physical abnormalities particularly those involving the sense of hearing and vision operate to retard the mental well being of children. Competent school surveys have repeatedly shown the prevalence of impaired hearing, defective vision, irritative teeth, diseased tonsils and adenoids, anemic disorders and nutritional defects.

It is well to recognize in this connection that the organ of mind is not the brain itself; it is the brain plus nerves, muscles, organs of sense and vital functions. Naturally any disturbances in any of them will interfere with the harmonious working of the mind. Emotional storms are also the result of faulty physical conditions and as mind activity is closely related to emotional reaction the process of mental decline is plain.

CONCLUSIONS

In closing, permit me to repeat that unsoundness of mind, in its various forms is alarmingly prevalent and constitutes an enormous economic burden. Its occurrence can be and should be di-

minished. There are difficulties in the way but they can be largely overcome if prophylactic measures are applied in early childhood.

The sort of mind an individual possesses depends upon the character of the brain he inherits, plus the external circumstances that act upon it. The first concerns heredity; the second environment. Practical eugenics has established certain facts which, if sanely utilized, may insure to future generations a better heritage than our own. Eventually, I believe, it will be the supreme duty of the State to interfere with the continuance of any human stock, known to be unalterably unsound. The public, already, is appreciating the importance of bringing children into the world well-born and one of the most hopeful signs, is the increasing number of young people, contemplating marriage, who are consulting physicians regarding matters of eugenics.

Mental hygiene for the present will find its greatest usefulness in encouraging investigation of environmental influences and their relation to the problem of mental betterment. Education will explain the danger signals of a wavering mentality and point out what elements are harmful and disastrous to the mental health of children. It should not be long until people generally are prepared to recognize and understand certain nervous and mental deviations in much the same manner as intelligent parents now detect the beginning symptoms of physical ill health. When that time comes mental hygiene will prove its worth and earn for itself the same dignity that is accorded hygiene of the body.

Finally I may add that the social worker, be he physician or layman, who devotes his efforts to this important service will place society deeply in his debt. He may receive no great outward recognition or reward but he will have raised the standard and heightened the sacredness of human life, promoted the well being and happiness of the otherwise hopeless, and helped to solve some of the most perplexing and urgent problems of our modern civilization.

THE ROSE BUILDING.

Diphtheria Antitoxin and Diphtheria Bacilli.—The well established curative properties of diphtheria antitoxin must not be confused with its possible value as a prophylactic against the disease. Attempts have been made to apply diphtheria antitoxin locally in the pharynx and nares with the hope of eradicating the objectionable micro-organisms that may have found lodgment there. Recent investigations to determine the effect of diphtheria antitoxin in preventing lodgment in and growth of the diphtheria bacilli in the nasal passages of animals were entirely negative (*Jour. A. M. A.*, Jan. 1, 1921, p. 41).

Some Clinical Observations on the External Malleolar Reflex—Chaddock's Sign*

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Editor's Note.—After prolonged clinical observation of the value of Chaddock's sign in the diagnosis of pyramidal tract diseases, Dr. Ingram has come to the conclusion that while the malleolar reflex does not in any way displace the Babinski, it would appear to be a more delicate sign and test. The Chaddock is a contra-lateral sign and is very useful in determining the degree of slight pyramidal trouble and it has the two advantages of appearing earlier and being seen later than the Babinski sign. The results of Dr. Ingram's report go to corroborate the original work of Chaddock himself.

IN neurology, as in every other department of medicine, we are constantly endeavoring to discover new methods of distinguishing between functional and structural diseases.

The particular object of this report is to contribute added observations on a new sign, which it is believed will enable us to separate normal from diseased conditions of the upper motor neurons or pyramidal tracts.

CHADDOCK'S SIGN

Since the day when the ankle clonus was our most reliable evidence of these diseased conditions, there have been added successively the Babinski, Gordon, Oppenheim, Mendel, and lastly, the Chaddock sign. Dr. Charles G. Chaddock read a paper before the St. Louis Neurological Society, May 29, 1911, in which he described the sign as follows: "It consists in irritating the outer side of the foot below the external malleolar process. The degree of irritation should be varied. In some cases the merest touch is sufficient to excite the sign; in others rather severe scratching may be required. I use a moderately pointed nail file for the purpose. Usually the most sensitive point is a slight depression just in front of the lower point of the external malleolus and behind the tuberosity of the cuboid, but sometimes the movement occurs more readily when the posterior groove is scratched."

This paper records observations on cases of miscellaneous diseases of the nervous system in which the pyramidal tracts are involved. These cases are taken from the neurological service of the Cincinnati Hospital. In all of these the Chaddock sign was elicited, and the contention of its discoverer, that the malleolar sign is equal in value to the extensor plantar reflex (Babinski), and that, being a more delicate test, appearing earlier and frequently lasting longer than the Babinski, and that it appears without the Babinski, whereas the Babinski does not occur without the Chaddock, was fully substantiated.

CASE REPORTS

I have to thank Dr. George Kilker, of the Cincinnati General Hospital, for assistance in collecting the histories. I wish now to present a

case report of a patient in whom the Chaddock sign could be easily demonstrated. The following is the history:

CASE 1.—Patient, P. McB. *Family history:* Father died by accident mother with myocarditis.

Patient's history: Has had scarlet fever measles, pertusis, and acute articular rheumatism. Denies venereal diseases.

Present condition: Hit on angle of jaw September 20th. Fell and became unconscious. Consciousness was regained after ten or fifteen minutes. He was to all appearances in normal condition for an hour, doing some errands during that time. Became paralyzed on left side after the expiration of an hour. He vomited incessantly for almost twenty-four hours. Deglutition was difficult and the act of swallowing almost impossible. Reflexes: Right, Chaddock; plantar negative. Left, Chaddock and Babinski were present.

CASE 2.—Left hemiplegis (thrombosis). Male, aged fifty-three.

Family history: Father died at fifty-eight, cause unknown; mother died at seventy-eight, cause unknown.

Past history: Had ordinary diseases of childhood; typhoid fever, pneumonia, specific urethritis twice; admits moderate indulgence in alcohol and tobacco.

Present history: Two weeks ago patient got up and suddenly fell over and could not arise, but did not lose consciousness.

Present state: Mental state normal, special senses normal, cranial nerves normal. Motor system: Paralysis of left arm and leg. Sensory system normal. Reflexes: Left knee-jerk exaggerated; Babinski present on left; Oppenheim present. On fourth day Gordon and Chaddock present on the right; on seventeenth day Oppenheim and Chaddock on left. Mendel absent. Sphincters normal. Gait, patient unable to walk.

CASE 3.—Right hemiplegis. Female, aged fifty-five. Family history unknown.

Past history: Childhood diseases, otherwise well.

History present condition: Onset came on slowly for one week, woke up one morning and found she could not talk or use right side. Speech cleared up in one month as it is at present.

Present condition: Mental state somewhat clouded; memory poor; very aphasic. Special

*Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

senses normal; cranial nerves normal. Motor system: Paresis of right forearm and leg, with some contraction of right arm. Sensory system apparently normal. Reflexes: Right wrist and knee-jerks exaggerated; Babinski, Chaddock and Oppenheim present, Mendel absent. On the right, ankylosis and Chaddock; on left Chaddock "fan." Sphincters normal. Gait hemiplegic.

CASE 4.—Cerebral thrombosis. Female, aged sixty-four. *Family history* negative.

Past history: Diseases of childhood, typhoid fever, acute rheumatism, moderate use of alcohol.

History present condition: Went to bed at night feeling well, awoke at 4:00 a. m. paralyzed on left side.

Present condition: Mentally very clouded. Special senses not obtainable. Cranial nerves: Third, left internal rectus shows weakness; seventh, left face paralyzed. Flaccid paralysis complete on left side. Sensory system: Left-sided hemi-anesthesia. Reflexes: abolished. On sixteenth day Babinski and Chaddock "fan" on right. On twenty-fourth day Chaddock and Babinski on left, Chaddock "fan" on right. Sphincters normal. Gait, unable to walk.

CASE 5.—Specific basilar meningitis. Male, aged forty.

Family history unknown. Admitted unconscious.

Past history: Childhood diseases, pneumonia, specific urethritis, and chancre ten years ago. Had rheumatism. Admits moderate use of alcohol and tobacco.

History present condition: Fell unconscious in the street.

Present conditions: Mental state decidedly poor, patient almost unconscious. Special senses normal. Cranial nerves: Pupils unequal, dilated, and do not respond to light. Does not protrude tongue. Slight weakness of left leg. Some difficulty in swallowing. Sensory system: No marked disturbance of sensation. Reflexes: Babinski, Oppenheim and Chaddock, left more marked than right. Sphincters normal. Gait unsteady; some spasticity in left leg.

CASE 6.—Basilar meningitis (syphilitic). Male, aged forty.

Family history: Father died at sixty-five, with cerebral hemorrhage. Mother is seventy, living and well.

Past history: Admits alcohol and had syphilis ten years ago.

History present condition: Had headaches for some months, especially at night; was quite restless and did not sleep well.

Present condition: Mind clear, special senses normal. Cranial nerves: Paralysis of left third and seventh nerves. Motor system: Very slight weakness of left arm and leg. Sensory system: No marked sensory loss. Reflexes: Chaddock and Babinski "fan," Oppenheim right and left, knee-jerk slightly exaggerated on left. Sphincters normal. Gait slightly spastic.

CASE 7.—Right hemiplegis, male, aged fifty-four.

Family history: Father died at seventy-four, cancer of tongue. Mother died at eighty-four with arterio-sclerosis.

Past history: Had childhood diseases; indulged in moderate alcohol and tobacco.

History present condition: Onset gradual for two weeks.

Present condition: Mind clouded, retardation of ideas. Special senses normal. Cranial nerves: Owing to clouded mental state, could not get reliable information. Motor system: Weakness of left arm and leg. Sensory system: Marked headache. Reflexes: Chaddock on left side. Sphincters normal. Gait very ataxic.

CASE 8.—Right hemiplegia, male, aged forty-nine.

Family history: Father died at sixty-two. Cancer of the stomach. Mother died at sixty-eight with Bright's Disease.

Past history: Had childhood diseases, pneumonia three years ago; gonorrhea; uses alcohol to excess.

History present condition: Three years ago hit on the head with iron beam, since, which time has been paralyzed. Of late, paralysis of left leg has been getting worse.

Present condition: Mind clear; special senses normal; cranial nerves normal; Motor system, paralysis of right side; Sensory system, no apparent change. Reflexes: Knee-jerk on the right is exaggerated; Babinski, Oppenheim, Chaddock, Mendel on right; Gordon absent; Left side, Chaddock "fan." Sphincters normal. Gait spastic.

CASE 9.—Right hemiplegis (cerebral hemorrhage. Male aged sixty-five.

Family history: Unknown, semi-conscious.

Past history: Unobtainable owing to state of mind.

History of present condition: Suddenly attacked while working.

Present condition: Very clouded, semi-conscious. Special senses could not be obtained. Cranial nerves, unsatisfactory, on account of mental state. Motor system: paralysis of right face, arm and leg. Sensory system not obtainable. Reflexes: Babinski or Oppenheim, right or left. Chaddock on right. Sphincters normal. Gait, cannot walk.

CASE 10.—Right hemiplegia. Male aged sixty-two.

Family history unknown.

History present condition: Existing aphasia renders history unobtainable.

Present condition: Patient seems clear, but cannot talk. Special senses unsatisfactory. Cranial nerves: Weakness of right face. Motor system: Complete paralysis of right side. Sensory system, unobtainable. Reflexes: Right side, Babinski and Chaddock; left side, Chaddock, plantar flexion. Sphincters normal. Gait, cannot walk.

CASE 11.—Cerebro-spinal syphilis; male aged forty.

Family history unknown.

Past history unknown.

History present condition: Mental state confused and could not obtain history.

Present condition: Clouded. Special senses unsatisfactory. Cranial nerves, weakness of left face. Motor system; slight weakness of left arm and leg. Sensory system, not obtainable. Reflexes: Knee-jerk slightly exaggerated in left, also Chaddock and Babinski "fan." Oppenheim right and left. Sphincters normal. Gait, both ataxic and spastic.

CASE 12.—Paraplegia; male, aged twenty-seven.

Family history: Father dead, cause unknown; mother living and well.

Past history: Measles, otherwise negative.

History present condition: Three weeks ago worked in rain, since which time has had pain in back and hips.

Present condition: Mental state normal. Special senses normal. Cranial nerves normal. Motor system, legs somewhat weak. Sensory system normal. Reflexes: Patellar increased, right and left. Third day patellar increased on left, also Chaddock and Babinski "fan." Sphincters normal. Gait, weak and spastic.

CASE 13.—Paraplegis (syphilitic); male aged forty-one.

Family history: Father died at forty, accidental; mother died at thirty-two, child-birth.

Past history: Has had measles, pneumonia, and had gonorrhea ten years ago, chancre nine years ago; admits moderate alcoholism and excessive use of tobacco.

History present condition: Suffered several attacks since 1905.

Present condition: Mental condition clear; special senses normal; cranial nerves normal. Motor system: Arms normal in power and range of motion; legs considerably wasted and spastic. Sensory system, no less of sensation. Reflexes: On thirtieth day Chaddock and Babinski present on both sides; on thirty-third day Chaddock and Babinski present right and left. Sphincters normal. Gait, very spastic, can scarcely walk.

CASE 14.—General paresis of the insane; male aged forty-three.

Family history: Both parents living and well.

Past history: Had typhoid fever, gonorrhea twice, and syphilis twelve years ago.

History present condition: Onset unknown, but from patient's account has acted peculiarly for some months before admission.

Present condition: Mental state, memory at times fairly good, and other times weak; attention good at times; cerebration at times good and other times bad. Special senses: Smell, taste, sight and hearing fairly normal. Cranial nerves (third, fourth and sixth); Pupils unequal, react sluggishly to light, fairly well to accommoda-

tion. Ocular movements are free in range and power. There is no ptosis, no nystagmus or squint. Fifth nerve, motor and sensory, normal. Seventh: Naso-labial fold on left almost obliterated. Twitching of muscles about mouth on attempting to speak. Ninth, tenth and eleventh: No difficulty of phonation or deglutition, but articulation defect on attempting to repeat "royal artillery." Twelfth nerve: Tongue protrudes in medial line; no wasting or tremor. Motor system: Arms normal; legs, some weakness and spasticity. Sensory: Anesthetic areas present over legs and arms. Reflexes: Right side, Chaddock present, negative plantar, Oppenheim and Gordon absent; left side, Chaddock and Babinski present. Patellar reflexes increased. Sphincters normal; gait, unsteady.

CASE 15.—Right hemiplegia (thrombosis syphilitis), male, aged thirty.

Family history unobtainable.

Past history unobtainable.

History present condition: A few days before admission had headaches, dizziness and became paralyzed.

Present condition: Mental state apparently clear. Special senses aphasic; cranial nerves normal. Motor system: Paralysis of right arm and leg. Sensory system normal. Reflexes: Patellar obtained with difficulty on right side; Chaddock, Babinski, Oppenheim, Mendel, and Gordon present also on right side. On left side is obtained Chaddock "fan" and acute plantar flexion. Sphincters normal. Gait, walks with difficulty, swinging right leg.

CASE 16.—Right hemiplegia (hemorrhage), male aged sixty-five.

Family history unknown.

Past history unknown.

History present condition: Onset sudden, while at work.

Present condition: Mind cloudy. Special senses negative. Cranial nerves normal. Motor system, paralysis in right arm and leg. Sensory system, unobtainable. Reflexes: Patellar reflex not obtainable on either side. On fifteenth day Chaddock and Oppenheim; no Gordon, no Mendel; plantar neither flexor or extensor. Left side, normal plantar flexion. Sphincters normal. Gait, cannot walk.

CASE 17.—Right hemiplegia (syphilitic); male, aged fifty-five.

Family history: Father dead, cause unknown; mother living and

Past history: Has had measles; syphilis; uses alcohol moderately; has had paralytic symptoms for twenty years.

Present condition: Mind clear. Special senses normal. Cranial nerves: Paralysis right face. Ninth, tenth and eleventh, showed difficulty in swallowing. Twelfth nerve, protrudes tongue to right. Motor system: Paralysis in right face, arm and leg. Reflexes: Knee-jerk exaggerated on right, also Babinski and Chaddock present;

left side normal. Sphincters normal. Gait, walks with difficulty, after hemiplegic type.

CASE 18.—Left hemiplegia (hemorrhage); male aged sixty-six.

Family history: Father died at fifty-five (malaria); mother died at eighty, of arterio-sclerosis.

Past history: While at work was suddenly stricken with paralysis of left side, remained unconscious two hours.

Present condition: Mind clear, though slow. Special senses normal, cranial nerves normal, weakness left face. Motor system: Paralysis left face, arm and leg. Sensory system normal. Reflexes: Left knee-jerk exaggerated; left Babinski, Chaddock "fan." Right side normal. Sphincters normal. Gait, spastic and hemiplegic.

CASE 19.—Left hemiplegia (thrombosis); male, aged thirty-six.

Family history unknown.

Past history unknown.

History present conditions: Two weeks ago went to bed feeling well, awoke next morning unable to move left side.

Present condition: Mental state cloudy. Special senses, unsatisfactory. Cranial nerves: Weakness of left face, and external squint of left eye. Sensory system: Left hemianesthesia. Reflexes: Babinski and Chaddock "fan" on left side. Sphincters normal. Gait, cannot walk.

CASE 20.—Meningitis (tuberculous); male, aged thirty.

Family history not obtainable.

Past history: Decline of health for several weeks.

History present condition: Onset unknown, owing to mental state.

Present condition: Unconscious; lungs show evidence of cavities. Special senses, not obtainable. Cranial nerves: Pupils widely dilated; do not react to light or accommodation; double divergent squint. Motor system: No marked paralysis; constant moving of arms and legs, almost convulsive. Sensory system, not to be obtained. Reflexes: Babinski, Chaddock, Mendel, Oppenheim, Gordon, on both sides and well marked.

CASE 21.—Depressed fracture of skull; male, aged 24.

Family history: Not obtainable.

Past history: Unobtainable.

History present condition: Admitted in an unconscious condition, with a large hematoma in right fronto-parietal region.

Present condition: Semi-comatose. Has had several convulsions in house. Special senses unobtainable on account of mental state. Cranial nerves: Pupils widely dilated, do not react to light or accommodation. Motor system: No symptoms of paralysis, only general convulsions as heretofore described. Sensory system unobtainable. Reflexes: Chaddock sign on left side only; no other signs obtainable. Operation relieved pa-

tient entirely in two weeks. No sign obtainable. Sphincters normal. Gait, normal.

A FEW CASES BY ABSRTACT

(A)—H. G., aged fifty-six. Fell unconscious, weakness of left side. Left pupil dilated. Right pupil does not react to light or to accommodation. Corneal reflex lost. Moderate paralysis of left side.

Reflexes	Right	Left
Biceps	—	+++
Triceps	—	+++
Supinator	—	+++
Wrist	normal	+++
Patella	+	+++
Achilles	+	+++
Epigastric	normal	—
Abdominal	normal	—
Cremasteric	normal	—
Babinski	+	+—
Chaddock	+	+

(B)—Louise L., aged sixty. Left hemiplegia.

Reflexes	Right	Left
Triceps	+	++
Biceps	+	++
Supinator	normal	—
Wrist	+	—
Patella	+	—
Achilles	normal	—
Epigastric	normal	—
Abdominal	normal	—
Babinski	—	+ Fan
Chaddock	—	+ Fan
Throckmorton	—	+

(C)—George M., aged fifty-four. Right hemiplegia.

Reflexes	Right	Left
Biceps	+	normal
Triceps	+	normal
Patellar	+	normal
Epigastric	—	normal
Supinator	+	normal
Wrist	+	normal
Achilles	normal	normal
Abdominal	—	normal
Cremasteric	—	normal
Babinski	+ Fan	none
Chaddock	+	+
Throckmorton	+	—

(D)—J. L., aged forty-six. Right hemiplegia.

Reflexes	Right	Left
Patellar	+	normal
Chaddock	+	+
Babinski	+	—
Reflexes	Right	Left
Patellar	+	normal
Chaddock	+	+
Babinski	+	—

(E)—J. M., aged sixty-three. Left side hemiplegia.

<i>Reflexes</i>	<i>Right</i>	<i>Left</i>
Patellar	normal	+
Chaddock	+	+
Babinski	—	+
(F)—M. F., aged forty. Right hemiplegia.		
<i>Reflexes</i>	<i>Right</i>	<i>Left</i>
Patellar	+	normal
Chaddock	+	+
Babinski	+	absent
(G)—Alice Williams, aged eighty. Left hemiplegia.		
<i>Reflexes</i>	<i>Right</i>	<i>Left</i>
Patellar	normal	+
Chaddock	+	+
Babinski	absent	+
(H)—H. L., aged thirty-six. Left side hemiplegia.		
<i>Reflexes</i>	<i>Right</i>	<i>Left</i>
Patellar	normal	+
Chaddock	+	+
Babinski	absent	+

CONCLUSION

In conclusion the essayist does not wish to say that the Chaddock in any way displaces the Babinski, but believes it to be a more delicate sign. We see so many case reports that are marked *no Babinski*, the plantar reflex may be negative or alternating or fan shaped; the Chaddock is a contra-lateral sign and is useful in determining degrees of pyramidal trouble of slight degree, and that it appears earlier and is seen later than the Babinski sign.

Dr. Dercum says that the Chaddock sign interrogates the same level as the Mendel-Bechterew, striking over the Cuboid bone.

Every clinician knows that neurologic signs vary from day to day; just recall that signs may not be elicited at the out-door department when the patient's feet are cold, and yet be easily elicited when they are warm and in bed.

NORFOLK BLDG., APT. No. 12.

Colds and Coughs*

G. H. Boehmer, M. D., Sandusky

Editor's Note.—Dr. Boehmer is quite right in saying that the seemingly inconsequential things of life and medicine are regarded with entirely too much indifference. Many medical students complete their college course and internship with a vaulting ambition to outstrip their elders in major surgery and internal medicine, not to mention the intricacies of the specialties, without having learned how to treat a cold or open a felon, and yet these two problems will haunt them night and day in their early practice. So also with many practitioners. Instead of mastering the treatment of minor and chronic ailments, upon which a profitable practice may be built, they are inclined to pursue the unusual and infrequent diseases which come to treatment so seldom. If you are not already familiar with Dr. Boehmer's one night cold cure why not try it?

IT has often occurred to me that the little elementary things in medicine as well as the little things in our every day life, are regarded by us with too much indifference and too much satisfaction. When all is said and done, it is more the little things that put the really *worth-while* into life, take the sting out of death, and are the primary and remote causes, the pronounced etiological factors, that enter into the disordered conditions of the various organs that inhabit the human body, than all other direct and contributory causes known to the art of medicine. To illustrate this point, I might make the assertion, that if at this moment there were conducted on the upper floor of this building, three clinics, *viz*: one, a thyroidectomy, another a spleenectomy and a third a simple catarrh of the stomach, indigestion or perhaps an ordinary case of phthisis, or primary anemia, where do you think the crowds would be found and where the empty seats?

Seemingly strange and only too true, it is the big things, the abnormalities and monstrosities that claim too much of our attention; the diseases and conditions that seldom happen, that we love to discuss best; the cases that are the rarest,

cases that an active general practitioner meets with perhaps once and very often never in all his activities, that he knows more about, than those diseases he treats and meets with daily, those that make up the regular routine category of his life work.

THE NEED OF CONTROLLING COLDS

Is it any wonder therefore, that so little progress is made in the treating of colds and their secondary disordered conditions?

In a recent paper the chief surgeon of the Ohio Soldiers and Sailors Home writes very learnedly on the simple little subject of vasectomy, and proves convincingly the incalculable amount of good humanity will derive from this procedure, and earnestly urges its legalization and adoption. I wish that I might be able to point out a cure, a prevention, or an immunization against taking cold. The dictionary defines a cold as "Privation or relatively low degree of heat, also a catarrhal or other disorder due to exposure to cold and wet." Could we but eliminate this old phrase of *catching cold* or consign it to the limbo of oblivion, just how much mankind would be benefitted I can hardly conjecture. You know only too well that nine out of ten cases that call at your office for help, attribute their ailments to *taking cold*.

*Read before a meeting of the Erie County Medical Society, 1920.

It matters not whether it be a case of lumbago, sore throat, diarrhea, pleurisy, neuralgia, neuritis, cessation of the menstrual period or what not, the cause is always the same "*caught cold!*"

BLOWING THE NOSE PROPERLY

Conjunctivitis, trachoma, middle-ear diseases, are mostly all secondary to a cold. The chief factor in these cases being a too violent blowing of the nose, forcing the infection through the tear ducts into the eyes and through the eustachian tubes into the ears. It is well, therefore, to instruct your patients, especially children who are suffering either with a cold or with an attack of the measles or scarlatina, just how to intelligently and safely protect themselves from such dreaded complications, by blowing their nose properly.

PRIMITIVE REMEDIES

In Garrison's "History of Primitive Medicine," I find the subject of colds and coughs, together with remedies, mentioned a number of times; thus proving conclusively that *catching cold* is as old as man and that no country, no race or no people are either exempt or immune. The primitive remedies for a cold of the respiratory tract, accompanied by an irritating cough are indeed amusing. The following is taken from W. G. Black, the leading English authority on medical folk lore. In Norfolk, England, a spider was tied up in a piece of muslin and pinned over the mantle piece as a remedy for a cough. In Donegal, a beetle in a bottle was regarded as a cure. In north east Lincolnshire, fried mice, in Yorkshire, owl broth. Sir Kenelm Digby proposed the following remedy for cold and chills. Pare the patients nails, put the parings in a little bag and hang the bag around the neck of a live eel and place him in a tub of water. The eel will die, the patient will recover. Be that as it may, there is no question in my way of thinking but what these superstitious remedies had their psychological effect, and that nature cured the disease, while the remedy amused the patient. And I am not so sure but what this statement is directly applicable to many of our *cure alls* of today.

When Napoleon's army of two hundred thousand men, picked from the very flower of France, invaded Russia, cold was directly responsible for its destruction as a primary cause. When Napoleon was exiled to St. Helena, his physician, Dr. O'Meary, writes that all of his physical ills and finally death was due to cold and exposure. You all well remember the last illness of our immortal and distinguished first President, how he was over-taken by a severe rain and sleet storm, contracted cold and died an untimely death.

TAKING COUGHS AND COLDS SERIOUSLY

I think the sooner we quit kidding ourselves with our so-called cold cures, the sooner we regard all colds, especially of the respiratory tract, with gravity and anxiety, impress our patients with their complications and secondary disorders and make them understand that isolation and

rest in bed is the most satisfactory, quickest and safest cure, we will have gone a long way towards accomplishing something definite, relieving much suffering and materially reducing our death rate.

TREATMENT

A very satisfactory treatment for an acute cold, where the upper air passages are involved, a treatment that produces prompt results, whenever you can administer it, is as follows:

A thorough rectal lavage, using plenty of saline solution. Then a very hot bath, having the temperature of your bath room about one hundred degrees. Remain in tub ten minutes, dry lightly with a coarse towel, retire to a warm bed, previously prepared with hot water bottles. Give one pint of hot flaxseed tea, containing some lemon and sugar, together with fifteen grain dose of urotropine. A sleep with a profuse sweat will follow. On awakening, supply fresh bedding and night shirt and repeat the dose of urotropine with thirty grains of bromide of sodium. Another sleep will follow and on awakening the patient's cold is practically aborted. Keep him in bed another day, giving copious drafts of carbonated water, light food and another rectal lavage.

All during the time your patient is in bed allow him to inhale mentholated vapor, by sprinkling a little menthol on the surface of boiling water placed in an ordinary receptacle. Should you prefer to use oil of eucalyptol, or juniper, or turpentine, you may, as the patient prefers. The inhaling of this vapor is particularly soothing and far superior to the use of an atomizer, which latter instrument by the way is usually out of order when you need it most. I certainly have no use for the time honored quinine and active catharsis, which I verily believe makes your patient more uncomfortable if not actually worse, and the old slogan is again applicable, "He got well in spite of the remedies!" Bald-headed men should wear a proper head gear during this treatment. Prevention and immunization still remain a hidden mystery, and the man or woman who discovers that much coveted secret, will be immortalized as one of the greatest benefactors of humanity.

What is it that gives a cold, cures a cold and pays the doctor's bill—a draft.

COUGHS

A cough is a sudden, violent expulsion of air from the chest, caused by irritation in the air passages or by the reflex action of nervous or gastric disorders. It may also be associated with heart and ear disease. I have nothing new to offer for the treatment of coughs. We are all, I am certain, trying to get away from the routine use of opium derivatives. Personally I like to give hyoscyamine in tablet form whenever heroine or morphine would be used ordinarily or considered indicated. I have also found the use of calceos tablets, three times a day, a beneficial form of therapy.

HURON AVE. AND ADAMS ST.

The Differential Diagnosis of Traumatisms and Diseased Conditions of the Esophagus*

Thomas Hubbard, M. D., and E. G. Galbraith, M. D., Toledo

Editor's Note.—Both acute and chronic disease conditions of the esophagus may simulate traumatism hence the necessity for a clear conception regarding the differential diagnosis of these confusing conditions. Before arriving at any definite conclusions in a given case from the clinical symptoms and history it is well to use the other diagnostic methods at the disposal of the practitioner and specialist, such as the esophagoscope and X-ray examination. Very frequently also a study of the throat reflexes will lead to an accurate diagnosis in obscure cases. As a valuable adjunct to a proper interpretation of the results of instrumentation the use of direct fluoroscopy is given credit for its value as a control.

ESOPHAGOSCOPY combined with radioscopy has awakened a new interest in the study and accurate diagnosis and treatment of esophageal diseases. Foreign body surgery has become a precise art and surgery in a general way has likewise progressed in that accuracy of diagnosis which establishes more definite indications as well as prohibitive limitations.

From the standpoint of the laryngologist, the interest in this line of special work centers on foreign body surgery and, at the same time, the broad knowledge of general diseases and necessity to make the differential diagnosis is forced upon him. The object of this paper is to mention some cardinal principles of diagnosis and bring out discussion and experiences along that line.

THE ROLE OF TRAUMA AS A CAUSATIVE FACTOR IN PATHOLOGICAL CONDITIONS OF THE ESOPHAGUS

Trauma is a very important factor in the etiology of pathological conditions of the esophagus. Taking into consideration the fact that the esophagus is the beginning of the vegetative tract, comparatively non-sensitive and of involuntary function, it is no wonder that the incident of a mild trauma escapes record. *Heat* is probably the most common of the minor traumas and the worst feature of the habit of hot drinks is that the habitue wants it hot enough to warm the stomach—and, oft repeated as it is,—the esophagus gets the worst of it. In contrast to this, *the abuse of ices* should be mentioned. Ice-cream is no longer a product of 20° to 30° temperature but it is marketed well down toward zero and, eaten hastily, can produce deleterious effects such as esophagismus and possibly more permanent disorders of the tract. Trauma during intoxication would rarely be registered. In fact anything short of a major trauma may escape the memory and therefore it is quite reasonable and at the same time good hygienic teaching to give warning that trauma is a very important etiological factor in pathological lesions and functional disorders of the esophagus. There is implied in all this a suggestion in history recording as an aid in diagnosis.

DIFFERENTIAL DIAGNOSIS

The patient usually comes with complaint of difficult deglutition or pain, sometimes both, in varying severity. Foreign body trauma and obstruction is usually sudden in onset—that is, a few days at most—and this fact aids in diagnosis. However, in children presenting no definite subjective symptoms—with perhaps only anorexia, malaise, et cetera, and lacking a definite knowledge of the incident of the foreign body,—one must consider an acute infection or diphtheritic paralysis or a low retropharyngeal abscess. A mediastinal gland may rupture into the esophagus, and there is a period of a short time prior to rupture when there would be a rather acute obstruction to deglutition. In foreign body cases the history or the X-ray findings are usually positive and indications for esophagoscopy are clear, but in another group of cases that are obscure as to symptoms either on account of age and for other apparent reasons, one must study by exclusion many possible pathological conditions. Of the acute conditions other than foreign body which may cause dysphagia and pain, one should consider esophagitis, myositis of the rheumatic type, and the functional disorders called esophagismus. Between the acute and chronic in matter of time would come retropharyngeal abscess (dissecting downward), periesophageal abscess (including mediastinal glands), acute thymus congestion, and also acute paraesthesia or anesthesia of hysterical or organic type.

In the more chronic group, presenting gradually progressive disturbance of deglutition, one must bear in mind a neoplasm, tuberculosis of vertebra, abscess, syphilis, tumor in the mediastinum, supernumerary thyroid or thyroiditis, aneurysm of the arch of the aorta, organic stricture, diverticulum with stricture, cardiospasm and chronic diseases of the nervous system like bulbar and general paralysis.

INDICATIONS AND CONTRAINDICATIONS FOR ESOPHAGOSCOPY

This gives a general idea of the range of diagnosis and since we approach the subject from the standpoint of esophagoscopy, it is in order to mention the limitations of this art and specify the contra-indications.

*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association during the Seventy-Fourth Annual Meeting, at Toledo, June 2, 1920.

Age is not important except that in very young infants the walls of trachea and larynx are so soft and yielding that even the smallest esophagoscopic tube may not be passed without some compression or even apnea. We have observed this latter condition in two infants a few weeks old. In one, the foreign body was finally extracted from a point below the cricoid and in the other it passed into the stomach; but in neither could any difficult manipulation have been accomplished. Aneurysm, (and this has been diagnosed as foreign body on account of a calcareous arch,) contra-indicates esophagoscopy in any cases exhibiting compression obstruction of the esophagus.

Extreme water hunger is a contra-indication to any surgical manipulation not reasonably sure of gaining a passage to the stomach. This may apply to such a condition as traumatic stricture of third degree, neoplasms, and even cardiospasm in its most severe type on account of the extreme sacculatation and, as in diverticulum, the difficulty of locating the lower orifice. As Jackson says, extreme water hunger makes a bad surgical risk and the point is that one must elect the sure way of gaining a passage to the stomach. In other words there are cases presenting indications for esophagoscopy in which gastrostomy is preferable to be followed, after recuperation by surgical treatment through the esophagoscope.

HANDLING DIVERTICULA

Diverticula can be studied by radioscopy and esophagoscopy. The former method needs no particular description but we will speak of the string guide method as used in esophagoscopy because it is particularly useful in subsequent treatment of all cases of stricture type. In cases exhibiting gradual closure, be it simple stricture diverticulum, neoplasm or even cardiospasm, it is advisable to get a string guide into the stomach and secure anchorage well down in the lower bowel before the stricture becomes impervious. The esophagoscope can be passed over this guide string drawn taut, and, if urgent a small tube can be pushed into the stomach for emergency feeding, and even dilators can be thus passed with a minimum of risk of trauma or perforation. The method advocated by Plummer is to have the patient swallow silk twist, about one-half to one foot an hour varying with calibre of stricture, until about five yards have passed into the stomach. In twenty-four to forty-eight hours it is anchored well down in the intestine, as can be tested by taking up all slack, and on this guide the esophagoscope or the dilator can be passed without danger of entering the pouch of the diverticulum or sacculatation above the stricture. This method can be used for feeding by stomach tube even in malignant disease without the danger of perforation and is probably better than gastrostomy in these hopeless cases. It is particularly applicable to strictures with pouching or saccula-

tion and to facilitate treatment in cardiospasm. In diverticula one can measure the depth of the pouch below the orifice by means of the bougie threaded on the guide. The string guide method is very useful in all cases of progressive stricture and it is applicable to all cases allowing the passage of even a small amount of fluid.

ESOPHAGITIS

Esophagitis has been mentioned. Any of the acute infections to which the throat is liable can invade the esophagus; including Vincent's angina and diphtheria. There is another type properly classed as a myositis, commonly called rheumatism of the esophagus, which may cause extreme dysphagia; and even this type, sudden in onset, and very painful, may simulate foreign body.

A woman of about forty noticed pain on swallowing at the evening meal. She was rather positive that no foreign body had been swallowed. The next day deglutition was too painful to be attempted and she came for examination convinced that there was a foreign body. There was slight fever and the pain was located below the cricoid. The X-ray findings were negative. She insisted on exploratory examination and I could only determine a moderate degree of hyperemia with slight edema but no definite trauma nor foreign body. She was given large doses of salicyllate of sodium per rectum and in a few days the painful deglutition subsided. That is a sort of therapeutic diagnosis but it seems rational.

Other cases have exhibited this same kind of muscle soreness simulating trauma and the question of exploration becomes urgent for the reason that delay is dangerous in all esophageal trauma. Swelling and edema make foreign body hunting and extraction difficult and hazardous and one cannot ignore the cardinal symptoms of foreign body pain and obstruction. So much in justification of exploration of these cases even though it probably aggravates the symptoms temporarily.

THE STUDY OF THROAT REFLEXES IN OBSCURE CASES

In all obscure cases it is well to study the throat reflexes. One may unexpectedly find hyperesthesia conducive to spasm instead of normal peristalsis of the esophagus or paresthesia or even anesthesia.

For example: A man of about forty complained of sudden dysphagia, rapidly developing to regurgitation of even liquids. There was no definite history suggestive of foreign body. Four days followed without anything passing into the stomach. One fluoroscopic examination, during which he tried to swallow barium mixture several times, failed because of defect in the apparatus and soon after that we tried again. The diagnosis could be inferred from the screen picture. Barium was seen in both lungs. Paresthesia or rather complete anesthesia of the pharynx, larynx and trachea explained the disturbance of de-

glutition. I then tested the hypopharynx and larynx and found the mucosa non-sensitive. The primary stimulus to the act of deglutition was wanting, accounting for what was apparently a real obstruction.

That picture, barium in the bronchi, impresses upon one the advisability of routine study of the sensory reflexes in the throat. No harm came from the accident in this case. We had to feed him through a stomach tube for about a week and then the power of deglutition gradually returned. Later this man developed general paresis.

Another case comes to mind: That of a man of seventy who had developed disturbance of deglutition for about six months. We found that the hypopharynx was not normally sensitive and there was probably one-sided impairment of muscle function. The fluoroscope showed normal passage through the esophagus but there was retention in the hypopharynx, the pyriform sinuses and glosso-epiglottic spaces on the right retaining the barium emulsion. It remained there some time, the left side being free. This was probably an organic nerve disease not yet declared to the degree of determining the diagnosis but strongly suggestive of incipient bulbar paralysis,—the diagnosis of a neurologist.

In this connection, we should add that we have found esophagismus associated with a nasal reflex. Removal of a large pendulous polypus relieved persistent esophageal spasm immediately.

Dr. Jackson calls attention to the fact that the hypopharyngeal spaces retain mucus and food particles in organic obstruction. The same is true of nervous diseases exhibiting paresis or paresthesia and particularly anesthesia. All this impresses upon one the advisability of general examination and also careful study by the indirect laryngoscopic method.

ESOPHOGISMUS AND CARDIOSPASM

This leads up to consideration of that group classified as esophagismus including so-called cardio-spasm.

The esophagus exhibits freaks of functional perversity probably due to the fact that it is the connecting link between the sensitive pharynx and a primary organ of the vegetative system, the stomach. The former responds to nerve impulses, volitional and reflex and the latter is dominated by the vagus and sympathetic system. It is between the two systems. Reversal of peristalsis as in emesis is the extreme physiologic act and as a matter of fact some of the queer perversions of esophageal function are suggestive of abortive attempts at emesis,—partial reversal of peristalsis. The mere matter of reaction of contents has apparently a considerable effect in disturbing its functions from the normal. The contents are normally alkaline and gastric acidity in the esophagus is a cause of persistent globus hystericus. Once this threatens, the psychic factor, excited by the lump in the throat, still further accentuates

the perturbation and we have a rather formidable disturbance. The mere craving for food, of which this is one manifestation, serves to aggravate and prolong the esophagismus. The diagnosis of globus hystericus can usually be determined by study along the lines suggested by the etiologic sequence.

The history and the characteristic stigmata of a phycho-neurosis usually clear up the diagnosis. In cases of this character one must take into consideration a trauma, or what might be called a near trauma such as overstretching or that caused by swallowing a very hot or very cold bolus of food. A more or less persistent sensation of lump in the throat may follow such an indiscretion and in the phycho-neurotic this suggestion is overworked.

Cardio-spasm, or rather hiatal spasm (Jackson), is one of the most formidable functional disorders encountered. Not rarely life is jeopardized by this condition. Many have died of starvation labeled organic stricture, and brought to autopsy, would show no lesion whatever except more or less dilatation of the esophagus. Diagnosis is of very great importance because this is not an incurable disease.

The interpretation of X-ray findings is a matter of great importance. The mineral foreign body is easily located. Lateral fluoroscopy may locate the site of a broad flat diaphaneous body simply by observation of the barium stream, flattened antero-posteriorly like a ribbon. Neoplasms may be outlined, distortions studied accurately, and paralysis and spasm determined quite positively.

In one case having a somewhat pedunculated tumor in the esophagus just below the cricoid region, the fluoroscope antero-posteriorly gave an almost typical picture of spasmodic stenosis, the churning of the bolus, hour-glass constriction effect, et cetera; but a lateral view almost outlined the movable tumor by the ribbon of barium bulging forward. This was verified subsequently by esophagoscopy, a movable tumor with a small base being disclosed.

Direct fluoroscopy as a control of instrumentation should be mentioned. For instance, in retrograde dilatation of impervious stricture, the fluoroscope is useful in guiding the sound passed through the gastric route, the vertebral column being the guide to the cardia. One can combine retrograde and direct bouginage and thus open extensive fibrous strictures.

Surgical Fads and Fancies*

O. S. Steiner, M. D., Lima

Editor's Note.—Fads and fancies in surgery, as in everything else, have their day and notoriety and then pass into oblivion, occasionally to be revived, or else to undergo practical adjustment and evaluation in becoming an integral part of standardized methods. The surgeon who has served his term as a general practitioner is usually freer from fads and fancies than others. He has learned the possibilities of all phases of medical practice and is not so apt to resort to the knife when other therapy will suffice for relief or cure. Of course surgery should not be standardized to such an extreme as to suppress initiative while at the same time it should not be allowed to become so radical that it invites public censure. Above all leaders in the profession should be the very ones to base their surgery on accepted principles and matured experience rather than upon their ability and daring to do the unusual.

TO-DAY'S surgery is the outcome of evolutionary processes. From the lowliest beginnings as practised by priests, barbers and their kind, surgery has been developed to its present degree of perfection, through the efforts of their followers in succession. This development has not been smooth and without handicap. Rather, it has been ruffled, and quite spasmodic; slow and groping at times, when a spirit of lethargy or superstition pervaded those in practice, or when fads and fancies and misapplication of principles occupied their attention; rapid and positive at times, when epochal and revolutionary discoveries and correct application of principles were made by enthusiastic men, men far in advance of their colleagues and time. More recently the development has been consistently progressive owing to an advanced civilization and better educational advantages to those entering the profession, research and consequent important discoveries, improved technic, and a proper appreciation of anatomy, physiology, pathology and diagnosis as a basis of procedure. It has kept pace with and abreast of civilization and now occupies a lofty position among the arts. It is ever the boon of the sufferer, the savior of many, otherwise mortally diseased and injured.

WHAT IS THE MATTER WITH SURGERY?

And yet, surgery does not measure up to its promise; it does not fulfill its desideratum; it does not occupy its proper niche. What then is the matter with surgery? While acknowledging that surgery is not and cannot be exact, yet it has not the due appreciation and confidence of man, the profession included; surgical failures both as to mortality and morbidity are rampant; a spirit of skepticism prevails. Wherein and why is this situation? Many and divers factors enter into an understanding, the answer. It cannot be denied that poor hospital facilities and unskilled nursing, poor anesthetics, lack of preliminary training and apprenticeship of the surgeon, too many operators and consequently too many occasional operators, failure in diagnosis as result of hurried or insufficient examination, lack of teamwork or cooperation with colleagues, faulty

choice of operation, poor technic, improper treatment before and after operation, commercialism, and the nausea and repugnance attendant to fee-splitting are factors of importance.

Further, it cannot be gainsaid that fancies and fads have played and are playing a great part in the hindrance to advancement and the attainment of its desired sphere by surgery. The entertainment of fancies is an attribute of man, and as such may be of value or otherwise, depending upon their employment. Fads are fancies run riot, and when based upon false premises or assumptions, or when following illogical deduction from facts, have done, can do and are doing great mischief, not only to the patient, but the individual surgeon and the entire profession. Also, an operative procedure may be scientific and practical and the result gratifying when certain conditions obtain, and yet if thoughtlessly and indiscriminately employed in similar or somewhat similar conditions may become a fad with accompanying obstruction to progress and attainment of the proper status of the art.

DISCARDED FADS

Amongst others of the fads that have gone before, some in the not far distant past, with attendant dire results, several might be noted as examples: Oophorectomy for nervousness, neurasthenia and hysteria; methods of and routine curettage of uterus independent of or prior to further operation upon the female genitalia; certain orthopedic procedures, as the inappropriate and indiscriminate use of Lorenz operation for congenital dislocation of the hip, employment of organic substitutes for functionless muscle and tendon, plaster paris jacket as primary dressing in fractures; certain methods of immobilization of fractures; certain positions of election for ankylosis of joints; routine use of a particular or same anesthetic in every case, regardless of the hazards distinctly evident; various operations for treatment of laceration of the perineum; various operations and suture material for hernia; various methods of closure of wounds; methods of treating the vermiform appendix.

PREVALENT FADS

Among fads that are enroute and engaging the attention of certain of the profession several

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of appreciable moment may be considered: Opening and reopening the abdomen again and again for adhesions is a nauseating fad extensively practised; the number of "chronic" appendices that have been amputated is appalling and unjustified; the routine use of eserine or pituitrin in after treatment while not particularly harmful, is not especially useful and is to be frowned upon; the Lane plate when properly employed in suitable conditions is a valued agent, yet because it has not been so used and became a fad, it has done more harm than good; the indiscriminate use of Dakin's solution and others of the newer antiseptics without due consideration of indications and technic has brought undeserved disrepute to valuable agents; transfusion of blood for pernicious anemia is a fad, the force of which is practically spent; various fanciful methods of treatment of empyema during the late war without thought as to the suitability of the case, and after results; artificially produced pneumothorax, an undoubtedly valuable procedure when taken advantage of in a suitable type of case, distinctly otherwise when a fad and not appropriately used; resection of the colon in epilepsy—sufficiency; ditto, for nephropexy and similar procedures for other viscera; the Gilliam and similarly employed procedures for retention in position of the uterus while of value at times have become harmful fanciful fads; thyroidectomy, a beneficent procedure when appropriately resorted to, yet dangerous and unfortunate when as a fad undue consideration is given to the particular indications therefor; Caesarian section, too, has its rightful place, yet has become an unnecessary and distressing fad; onslaught upon the gall-bladder has become an unwarranted fad.

A fad within a fad is routine cholecystectomy. It is safely to be assumed that some of the cases of gall-bladder disease are and may be well treated by medical means. Of those that must have surgical interference a considerable number may be treated by cholecystostomy as a method of choice. Yet, it is to be deprecated that there are those who advocate and do the "ectomy" in all cases. This is as unnecessary and mutilating as the routine enucleation of all tonsils or performing a mastoid in all cases of otitis media; gastroenterostomy is a veritable God-send in an appropriate case, an abominable curse when ill advised. A realization of the extent and harmfulness of this fad is gained by a visit to large centers and noting the number of cases that must be undone and restored to the previous state and with gratifying results; the fad of the use of the X-ray and radium in conjunction with surgery as curative agents before and after operations, in operable and inoperable cases, has become far-reaching and wholly unwarranted by results obtained. That the X-ray and radium are of sufficient value to be entitled to employment by the profession there is no argument. But, the pronouncement and acceptance by the profession

and the manner of exploitation of these agents by certain advocates as infallibly curative are blots upon the integrity of the profession which will be hard to efface.

FANCIES DUE FOR REVIVAL

Fancies which are about to be revived and thrust upon the profession and may become pronounced fads are vasectomy (now practised to a degree) and castration of all dependents, defectives and delinquents, and the transplantation of monkey, ram, goat, et cetera, interstitial glands and use of endocrines to the happy consummation of an old age deferred. Other fancies and prevailing and approaching fads might be enumerated and their fallacies certified to. Suffice it to say they severally and collectively tend to produce a lack of due appreciation of the actual accomplishments of surgery, to generate a spirit of skepticism in and to lower the dignity of the profession and to prevent rightful progress. What is the remedy? How may the situation be met and the evils curtailed? Allow the submission of a few suggestions and observations.

MEETING THE PROBLEM INVOLVED

Prior to matriculation in a medical school the prospective surgeon should be studied and obliged to submit to a psychologic examination in order to determine, if possible, not only his ability and adaptability but the inherent mental stability and equilibrium so essential to a really successful career. Such measures should exclude those with irrational tendencies, the flighty and unstable, the faddist in embryo. Having received an adequate preliminary and scientific education he should serve an internship in a standard hospital and become a general practitioner before taking up the specialty. He should also serve an apprenticeship to a successful, up-to-the-minute surgeon.

Research is a prime requisite to progress and enthusiasm properly directed is to be religiously encouraged, but the effort should be to avoid entertainment of fanciful ideas and pursuit of unreasonable and insufficiently tried or proved methods. To this end there must ever be a proper orientation of facts and procedures to serve as a check or guide.

The surgeon should be zealous and optimistic as to progress, but should not allow his vision to become so narrowed and beclouded as to cause him to chase phantoms and rainbows.

There should be a general standardization of methods and procedures based upon facts and accepted principles and results. This would not preclude the use by the surgeon of his surgical judgment and interpretation of findings at examination or operation and adaptation of procedure or technic suited to the case.

He should ever take advantage of acceptable team-work with colleagues.

Fanciful, time-worn, obsolete and untrue state-

ments in surgical monographs and systems should be eradicated.

The attitude of the surgeon should ever be constructive and conservative. In making this statement, it is recognized that the most conservative sometimes appears the most radical.

Noted and big men in the profession should not be too hasty in expressing revolutionary ideas and should use care in promulgating procedures that are "different." Some men do not use sufficient judgment, are easily influenced and even misled;

fads are the consequence.

New procedures should be well worked out as to principle and application before they are submitted and vaunted to the profession, which in turn should consider them well. Weight of opinion should influence adoption or rejection.

The profession should not be placed in a position that it must reverse its attitude.

The surgeon should always think logically and judiciously, and should let an unthwarted conscience govern his acts.

The Use of Iodized Table Salt in the Prevention of Goiter

Harry G. Sloan, M. D., F. A. C. S., Cleveland

Editor's Note.—Those readers of *The Journal* who perused the special goiter number will appreciate the utility of iodine medication, in one form or another, in the control and treatment of goiter. In an effort to provide an inexpensive routine and popular prophylactic Dr. Sloan suggests the use of iodized table salt especially in those regions which are considered goitrous. To be efficient the concentration of the iodine does not need to be more than 1 in 5,000. If salt containing this minute quantity of sodium iodide could be used for all individual household purposes throughout the goiter belts, it is Dr. Sloan's opinion that the development of endemic goiter in the second generation would be prevented and that other goitrous conditions would not be exaggerated.

ONE of the most important of the so-called *goiter belts* in the United States is the Great Lakes Basin. The menace of goiter within this region is well-illustrated by the following excerpts from a recent personal letter received by the author from Dr. Rockwood, the Health Commissioner of Cleveland:

"The total number of deaths from hyperthyroidism in 1918 was 37, or three more than last year (i. e. 1919). In addition to this, our records show that deaths from other diseases of the thyroid body, which might have been of goitrous origin, amounted to 7 in 1919 and 4 in 1918. As against this record, the typhoid deaths in 1919 were 21, and in 1918, 37."

In view of such figures as these, continual consideration of methods of prevention as well as of cure is an urgent necessity. As a possible contribution to this end the following suggestion is offered.

IODINE DEFICIENCY IN RELATION TO GOITER

Extensive researches with animals and observations in man indicate that endemic goiter is due to a lack of sufficient iodine to supply the demands of the organism. Because of the peculiar function of the iodine-containing secretion of the thyroid gland, the lack of iodine is especially demonstrated in conditions of special stress as for example, adolescence, gestation, et cetera. It is during such periods, therefore, that the thyroid gland becomes overworked in its effort to function properly and goiter develops. It follows that if the supply of iodine from the thyroid can be augmented by suitable iodine administration this danger may be averted. Moreover, in the period of gestation in a goitrous bitch, if there is a lack of sufficient iodine during pregnancy, not only will the thyroid of the mother become enlarged but

there will develop also a hypertrophy of the thyroid of the fetus. Marine has shown that the administration of iodine to goitrous pregnant bitches prevents thyroid enlargement in the pups. It is well-known that the sheep industry in the St. Clair Flats was threatened with extinction because of the prevalence of goitrous ewes and the resultant occurrence of huge thyroids in the lambs. In consequence, cretinism developed in the lambs and they did not mature properly. Marine again showed that this damage could be entirely eliminated by adding a small percentage of iodine to the salt given to the sheep.

As previously mentioned, the period of adolescence, like the period of gestation, produces an overstrain upon the iodine-deficient thyroid; and therefore in the goiter belts goiters occur with alarming frequency during this period, especially in girls. Pursuant to the success of iodine-administration in animals, already noted, Marine has attempted the control of goiter among school girls. With the cooperation of the school authorities in Akron, under Marine's direction, during the last three years iodine has been administered to girls in the public schools from the fifth to the twelfth grades, with the result that among those receiving iodine, increase in existing goiters and the occurrence of goiters where they were not pre-existent, has been almost entirely prevented. In fact, Marine reports only two cases in which goiters continued to develop during the administration of iodine, one of them being a girl with badly infected tonsils, and the other, one with congenital syphilis.

COMMUNITY ELIMINATION OF ENDEMIC GOITER

In view of these facts it would seem that if we can find a ready means whereby iodine may be constantly supplied in sufficiently small amounts

to all the inhabitants of a goiter belt, endemic goiter will be practically eliminated in the second generation. Such a result would be of immediate value to the community as not only would a certain number of deaths annually be prevented but there would also be abolished the partial disability which characterizes the majority of goiter patients,—ready fatigue, nervous instability, and cardiac weakness. The economic result to the community and to the individual would be a huge saving in the lessened need of hospital care and in the elimination of impaired earning capacity.

The problem therefore resolves itself into two queries:

1. How much iodine is necessary to make up for the natural deficiency in the goiter belts?
2. What is the most efficient method of administration?

METHODS OF IODINIZATION

The normal thyroid gland contains about 30 milligrams or approximately $\frac{1}{2}$ grain of iodine, in a specially fabricated compound known as thyro-iodine. This is used over and over again in the body economy in some such manner as bile is reabsorbed and used over again from the intestinal tract. That the iodine in thyro-iodine is the vital active principle is shown by the fact that iodine in other compounds or by itself is utilized in the same manner.

Iodine may be taken into the body by inhalation, by absorption through the mucous membranes of the gastro-intestinal tract, or by absorption through the skin. Thus the need of iodine has been generally met by painting the skin with iodine or in the dosage commonly prescribed for adolescents in Cleveland or that employed by Marine in the Akron schools; *i. e.*, syrup of the iodide of iron, one drop per year of age daily during alternate months, or sodium iodide in 0.2 grain doses daily for ten consecutive school days in the spring, and in the autumn. In the Swiss schools it has been a recent custom to suspend a wide-necked bottle of iodine in the school room so that the pupils may inhale the fumes. Each of these is a troublesome method. It is difficult to bear in mind just when the periods of administration begin and end; and there is a great tendency to neglect the routine administration with children until signs of thyroid enlargement begin to become apparent.

In the case of pregnancy assurance of the proper administration of iodine is even more uncertain. Moreover with patients with goiter of the exophthalmic type iodine in even the dosage noted above may be dangerous; and only a physician of wide experience can differentiate between colloid enlargement and certain stages of exophthalmic goiter.

USE OF IODIZED SALT

Since it would appear that in the goiter regions the lack of iodine is due to some deficiency in the

food or water, it would seem a natural means of administration to add iodine to the water or to some universally used article of food. To add iodine to the water supply would be too expensive a process, for since large quantities of water are used for other purposes than drinking, large amounts of iodine would be wasted. Next to water the most universally used article of food is common salt. It therefore seemed to the writer that it might be practical to add by trituration a minimum amount of iodine to our ordinary cooking and table salt. Most of the salt brines from which salt is crystallized contain a small amount of iodine, but unfortunately in the process of crystallization the iodine, with other elements such as bromin, remains in the mother liquor. In a research by E. B. Forbes at the Ohio Agricultural Station at Wooster, Ohio, no trace of iodine was found in any one of twelve varieties of salt manufactured in western New York, eastern Michigan, and Ohio.

To completely vaporize the salt brine would be too expensive a method and in addition the iodine would be removed by the process of purification. The only practical method, therefore, would seem to be the artificial addition of iodine to common salt. Sodium iodide is the best of the various iodine salts for this purpose for the following reasons: it is comparatively inexpensive; it can be used in cooking as well as in table salt because the iodine will not be volatilized at the boiling point; and it will not be readily decomposed by the minimum amount of impurities found in ordinary salt. The use of the iodine in cooking as well as in table salt is rather essential as many people, children in particular, do not add salt to their food at the table.

To be efficient the concentration of the iodine does not need to be more than 1 in 5000. If salt containing this minute quantity of sodium iodide could be used for all individual household purposes throughout the goiter belts it should prevent the development of endemic goiter in the second generation; and on the other hand the small amount of iodine thus consumed would not be sufficient either to push farther a goiter of the exophthalmic type or to force a mildly toxic goiter into the exophthalmic type.

It is not assumed that this iodized salt would cure even a simple goiter, especially if it has grown to an appreciable size. It has been found that many simple goiters are due to the presence of infection, especially in the mouth or nasopharynx. After the removal of the foci of infection, the administration of iodine causes a rapid reduction of the thyroid enlargement. It should be noted also that iodine will not cure adenomatous goiters; for these, the only cure is removal.

With the elimination of these two groups of cases, there remains the enormous group which we have been considering, adolescents and prospective mothers with existent goiters. The pre-

vention of the tendency to goiter in the former, and of the occurrence of fetal adenomata in the off-spring of the latter is surely worth the trial

of any means whereby the proved specific—more iodine—may be readily and rapidly administered.
1021 PROSPECT AVE.

Proctitis Sphingos*

J. M. Frick, M. D., Toledo

Editor's Note.—In his brief paper Dr. Frick calls attention to a comparatively rare, but unusually distressing condition, which is characterized by a distinctive clinical pathology and symptomatology but is as yet without a satisfactory explanation regarding its exciting cause or its source of infection. The condition is an acute inflammation of the rectal mucosa, extending from the white line of Hilton to the upper margin of the internal sphincter muscle. The pain associated with the disease is peculiar in that it usually occurs before the patient arises in the morning and gradually subsides after a movement of the bowels. Fortunately the condition yields rapidly to local and general therapy and the results of treatment are satisfactory to the patient.

THE condition I wish to present, is an acute inflammation of the rectal mucosa, extending from the white line of Hilton to the upper margin of the internal sphincter muscle.

The disease is focal and the symptoms are distinctive. The condition, I believe, should be designated by a name descriptive of its pathology and location.

PECULIARITIES OF THE CONDITION

Proctitis sphingos is comparatively rare, of sudden onset, and rapidly assumes its characteristic symptoms.

The history of these cases will attract your attention, by their apparent inconsistencies. Usually there is pain in the back and rectum, often comparable to a toothache, of greatest severity just before arising in the morning, continuing until the bowels act, after which the patients gradually regain a sense of well-being, and usually assume at least a portion of their daily duties.

Differing from other acute inflammations in the rectum, wherein the patients suffer a restless night, and are able to rest only in the early hours of the morning; these patients are awakened early by the proctalgia, with the pain referred to the sacrum, making further rest in bed intolerable.

While the act of defecation is painful, they soon learn by experience that it is followed by relief, and resort to active cathartics, to induce bowel action as soon after arising as possible.

Patients suffering from other painful diseases of the rectum and anus, on account of the pain persisting after the bowels act, defer the act of defecation as long as possible, thereby inducing constipation.

DIAGNOSIS

In none of my cases has the history revealed a satisfactory explanation of the exciting cause, or source of infection.

We are dependent upon physical examination, for our diagnosis in proctological diseases.

With the patient in the left lateral position, the perianal region and anal canal are negative on inspection.

Digitally the external sphincter is of normal tonicity. The internal sphincter is in a state of contraction, and tender to the touch.

Through the endoscope the ampulla is seen to be normal and free from content. The mucosa from the white line of Hilton to the upper margin of the internal sphincter muscle, in its whole circumference, is hyperemic, edematous and glistening, being bathed in a thin clear mucous secretion, and tender to the touch of the swab.

The macroscopical pathology is similar to that found in acute catarrhal inflammations of the nose and throat.

The diseases from which it is necessary to differentiate proctitis sphingos, are acute catarrhal proctitis, internal fissure and fissure-in-ano.

In acute catarrhal proctitis the ampulla of the rectum is involved, showing acute inflammatory changes; tenesmus is also very annoying, and there are more or less constitutional symptoms.

An ulcer of the mucosa, situated well within the grasp of the internal sphincter has been referred to by my colleague, Dr. L. J. Hirschman, as internal fissure, thus distinguishing it from a more general ulceration of the rectum.

The peculiar burning pain associated with this lesion, is induced by the act of defecation, and continues for a considerable period thereafter.

There is a single point of tenderness on digital palpation. Also endoscopic examination reveals a linear ulcer in the midline, posterior to and well within the internal sphincter.

In fissure-in-ano, the symptoms commence with bowel action, increasing in severity immediately after, and sometimes persisting for several hours.

Diagnosis is made by inspection. The ulcer is found in the anal canal, in either the anterior or posterior commissure, usually the latter.

The external sphincter muscle is always in a state of spasm.

TREATMENT

The distribution of sensory nerves to the rectum terminates very close to the white line of

*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

Hilton. This sensory nerve supply is derived largely from the pudic nerve, which in turn is a branch of the sacral plexus.

From our previous experience of relief following early and complete evacuation of the rectum, it is obvious that our early morning symptoms, are the result of the passive congestion and irritation, due to the accumulated intestinal content.

The treatment is directed entirely to the local condition. A warm cleansing enema is given early in the morning, to be followed by a sitz bath of twenty minutes duration.

A five per cent solution of silver nitrate is applied directly to the affected part, through an endoscope, every other day. The applications are at first painful, but become less so with each succeeding treatment.

A general vegetable diet is ordered. A diet leaving a big residue, has less fluid absorbed, and consequently there is less irritation on evacuation.

The improvement is rapid and the result is satisfactory.

411 NICHOLAS BLDG.

Intra-Ocular Infection With an Organism of the B. Subtilis Type*

Paul J. Stueber, M. D., Lima

Editor's Note.—Current medical literature is presenting so many reports of anthrax infections in so many localities—and from so many unusual sources that even public health officials are giving the matter their attention. In this connection the question arises, in view of the findings in the case reported by Dr. Stueber, as to whether or not some of these infections credited to the anthrax bacillus may not be due to the bacillus subtilis. Bacteriologically both organisms have certain mutual features and clinically the manifestations of both infections are so similar as almost to preclude differentiation. The results of subtilis infection are especially interesting as they show that this saprophytic organism can act pathogenically in a wound. Aside from the indicated surgery in individual cases it would also seem advisable to use anti-anthrax serum and an autogenous vaccine if the offending organism can be isolated.

IN presenting the report of this case I beg to call your attention to the fact that the provisional diagnosis of anthrax, corroborated by our local talent, and upon further investigation of the character of the organism by the Bacteriological Laboratories of the University of Michigan, lead to the further discrimination and isolation of the organism, and the conclusion that it is a member of the bacillus subtilis type. Bacteriologically this organism has certain features very similar to the anthrax bacillus. Clinically, the manifestations were so in accord with that of anthrax that those who had seen anthrax previously corroborated the diagnosis without hesitancy.

Whether this particular organism represents a type of greater virulence than the majority of the subtilis bacilli, and may even be a type of anthrax, is open for speculation. Certain types of cellulitis are diagnosed as an anthrax infection and in a recent report, two cases of clinical anthrax were without definite bacteriological evidence.

The identification of many of these bacilli is not very satisfactory because of the great variability of the bacillus subtilis.

RESULTS OF SUBTILIS INFECTION

The subtilis results are of very great interest as they show how this organism considered to be

a mere saprophyte, can act pathogenically in a wound, especially of the eye.

It is again interesting to note that the stems, which are very pathogenic in the vitreous, produce no inflammation worth mentioning in the cornea.

With the inoculation of subtilis spores into the eye infection has always developed immediately.

In the interior of the eye the bacillus subtilis increases until after the first 36 hours, but after 48 hours degeneration sets in and as a rule bacilli cannot be found in the vitreous after 4 days.

It is thought that the bacilli also find the natural limits of their growth in the enclosed capsule of the globe and that their death still further inhibits the growth of the rest. There is generally no spore formation in the vitreous.

The usual tendency, however, is for the inflammations in the anterior chamber to heal without any serious result, while after vitreous infection the appearance of a pan ophthalmic pseudo-glioma, cataract, and in the end phthisis bulbi is the rule. The final result being due to changes in the uvea.

Bietli emphasizes the fact that in human pathology we cannot unreservedly give the significance to these organisms which the results of their experimental inoculation might seem to imply.

CASE REPORT

The cases, however, of infection with subtilis, so far recorded, have been due mostly to direct infection from a soil-contaminated foreign body.

*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

January 5, 1920.

Case 1. Patient, young man, O. F., Celina, O. R. 8, aged 17, occupation, farmer.

The patient up to the time of the accident had been engaged in hauling stone for the repair of a country road.

There is no history of any anthrax cases in the immediate community nor have there been any recent sick animals on this farm.

In the autumn the barn was repaired and a concrete floor replaced the old one.

The previous evening while attempting to remove the cork from a horse shoe with a cold chisel, a fragment of metal flew-up, striking the left eye, perforating the cornea and passing through the iris.

Condition at time of examination:

Left Eye. Patient was unable to submit to a proper examination of the eye as marked blepharospasm interfered with the procedure.

L. E. = 0

V. =

R. E. = 20/40

Lids were somewhat swollen, globe injected, cornea hazy, which at the site of two o'clock presented a perforation that extended into the iris and presented an appearance much as a key hole. No prolapse of iris. Tension minus. It was impossible to proceed with fundus examination.

Roentgen ray demonstrated a foreign body within the globe.

That afternoon at four o'clock a piece of metal, the size of a wheat-grain was removed from the left eye by means of the electro-magnet, the metal being extracted through the original opening.

The marked injection of the globe and the slight traces of purulency in the intra-ocular fluids gave evidence of an active infection.

January 6.

Lids very edematous and swollen, so engorged that they were difficult to open, brawny in color and very firm to pressure; the globe presented a greater inflammatory change than one would expect at this time, at the site of the wound we had a trace of purulency, from which a culture was made.

The left side of the face presented the same brawny edematous appearance as the lids, the edema extending well out, surrounding the orbit, including the forehead, cheek and neck.

The marked edema of the eyelids and tissues surrounding the orbit; primarily the lack of pus; the comparative absence of pain; wide spread infiltration with the brawny character, as well as the degree of temperature lead one to an approach of the diagnosis when considering how the infection was contracted.

January 7.

Condition practically the same. Temperature 100. Patient felt exhausted. Prophylactic dose of anti-tetanic serum, 1,500 units, given.

Urotropine gr. X. every 4 hours. Irrigation of

eye every 3 hours with bichloride solution, 1/10,000.

The surprising feature was the small amount of purulency emanating from the globe and the extensive character of the edema.

The establishment of a provisional diagnosis of anthrax was made by a conference of our local talent and consultation was held; and from the evidence at hand, both clinical and bacteriological, the diagnosis was concurred in.

January 8, 1920.

Large conjunctival blebs were opened.

Incised cornea and eviscerated the contents of globe. Irrigated the interior of the eye with bichloride solution 1/10,000.

We waited in vain all day for the arrival of the anti-anthrax serum.

Pain was not a prominent symptom and the systemic manifestations were comparatively mild



Appearance after the brawny edema had subsided.

although the patient complained of being very weak.

January 9, 1920.

Reduced Urotropine to gr. X, three times a day, because of urinary irritation. At 8:30 A. M. administered 20 cc. of anti-anthrax serum. (P. D. & Co.).

Patient was feeling some better and appetite was excellent. Temperature 102°.

Injected a 3 per cent. solution of carbolic acid in the retro-bulbar orbital tissues.

Incised newly formed conjunctival blebs with escape of sero-sanguineous fluid as before.

At 4 P. M. administered 26 cc. of anti-anthrax serum.

From then on, we left a cotton wick in the corneal incision saturated with 3 per cent. carbolic

acid solution, alternating with bichloride solution 1/10,000.

The great danger in this case was considered to be the extension of the process to the cerebral sinuses, with blocking of lymph and blood capillaries, this being a characteristic of the infection, due to the large size of the organism and the rapidity of the development.

January 10, 1920.

Administered 26 cc. of serum. Newly formed conjunctival blebs were incised.

Digitalis, min. X, was given three times a day. Temperature 104°. Pulse 60.

January 11, 1920.

Anti-anthrax serum, 25 cc., given.

The patient gave evidence of exhaustion.

Quinine sulphate gr. 2 every four hours.

January 12, 1920.

Serum 25 cc., (Mulford), given.

January 13, 1920.

Temperature normal. Administered no serum today.

January 15, 1920.

Enucleated remainder of the globe.

The eye upon removal was approximately the

size of a prune; to the finger it felt as a gelatinous mass.

The contents of the globe were eviscerated some days previous, nevertheless the inflammatory thickening gave the impression that it was a solid mass.

Hemorrhage upon enucleation was of the usual character. Surrounding the globe in the orbit were masses of sclerotic tissue, thickened and firm, evidently lymphoid in nature; these areas each were about the size of a pea and were removed.

The orbital wound was cauterized with carbolic acid.

Pathological Diagnosis.—Hemorrhagic panophthalmitis with destruction of all the parts, with very little leucocyte reaction except in localized areas. No bacilli were demonstrable in the tissues.

From now on the patient made an uneventful recovery.

January 22, 1920.

Patient returned home.

February 1, 1920.

20

Patient doing fine V.=0.D.—

20

Placenta Previa With a Report of Five Cases

W. F. Dager, M. D., Lorain

Editor's Note.—In its ultimate analysis the handling of placenta previa involves attention to many details of diagnosis, obstetrical technique and postpartum therapy, if both the child and mother are to be saved and the mother spared from a long, tedious invalidism or convalescence. In outlining the general considerations of this subject Dr. Dager makes many valuable points and it is interesting to note his application of them when confronted with the various emergencies arising in the cases he reports. While many practitioners manage placenta previa cases very well from the mechanical standpoint, all too many mothers are allowed to suffer the shock, infection and postpartum hemorrhage associated with the condition and when these also can be combated the practitioner is doing his level best.

PLACENTA previa is one of the most serious complications of labor. The placenta is previa, when the attachment encroaches upon that portion of the uterus, which is subject to dilation during the first stage of labor.

FREQUENCY, CAUSE AND CLASSIFICATION

The frequency of this condition varies in different localities and at different times. Some writers report its occurring as often as once in fifty labors, while Lusk, in his report of 1550 labors, did not meet with a single case. The general average seems to be one in one thousand confinements. It occurs from four to six times more frequently in multiparae than in the primiparae.

The cause of placenta previa has never been definitely established. Many writers maintain, that any condition of the uterus that would

sweep the ovum into the lower uterine segment, would permit of its lodging there and consequently the production of a placenta previa. The conditions most likely to produce such an abnormality are, subinvolution and chronic endometritis, which are most frequently found in multiparae. A low position of the tubal orifice is also a cause. Webster holds that there may be a development of the chorionic villi on the decidua reflexa, producing a reflexal placenta. This latter condition is a frequent cause of abortion.

The cause of *unavoidable hemorrhage* is due to a partial separation of the placenta from its uterine attachment. This exposes the sinuses at the placental site, and permits of an outpouring of blood. The hemorrhage is greater, and begins earlier the more central the location of the placenta.

There are various classifications of placenta previa: Hirst gives four divisions (central, partial, marginal and lateral); Polak divides pla-

*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 1, 1920.

centa previa into two classes (partial and complete). In the partial, the great mass of the placenta lies on one side of the lower uterine segment, partially covering the fully dilated os. In the complete variety, the placenta is more or less centrally located, and wholly covers the fully dilated os.

SYMPTOMS

Hemorrhage is the predominating symptom. It usually begins with a sudden outpouring of blood, of varying intensity and amount. The first hemorrhage usually begins about the seventh or eighth month, though it may begin as early as the second. There are rare occasions, when the bleeding begins with the starting of labor. The bleeding may stop entirely, during the height of the pain, and return as the pain subsides.

Uterine inertia is quite common during the first stage of labor. It is due to the absence of reflex irritation, owing to a lack of pressure on the cervix by the presenting part. This condition may exist after labor and be the cause of postpartum hemorrhage.

PHYSICAL SIGNS

(a) Abdominal palpation may reveal the location of the placenta, if the patient is very thin. In such patients, with an anterior implantation of the placenta, the convex edge can be traced as a resisting ring. Abnormal presentations and positions are common, owing to the occupation of the lower uterine segment by the placenta.

(b) Vaginal examination shows:

1. An unusual development of the cervix, and a pronounced pulsation of the vessels in the central variety.
2. A cushiony mass may be detected between the presenting part of the fetus and the examining finger.
3. There is a considerable boggiess of the cervix, vaginal vault and the lower uterine segment.
4. There is a characteristic stringy, gritty feel to the mass, that distinguishes it from the smooth feel of the blood-clot.

PROGNOSIS

Without intervention, the maternal mortality is from 1/3 to 1/2, where the cases go to the latter weeks of pregnancy. The maternal mortality is due to hemorrhage, shock, sepsis, rupture of the lower uterine segment and thrombotic affections. Maternal deaths are rare before the seventh month.

Two thirds or more of the children are lost. The fetal deaths are due to asphyxia and hemorrhage.

TREATMENT

The treatment of placenta previa varies with each individual case. The methods adopted should depend on the amount of hemorrhage, the

condition of the mother and the stage of gestation. For convenience it is well to divide the treatment into two classes, viz:

(a) Before viability. (b) After viability.

(a) During the period prior to viability, the termination of pregnancy should depend on the degree of hemorrhage, and the care the mother can obtain. If the hemorrhage is moderate, the child is alive and the mother can live a life of ease, the expectant plan is all right. But, if the hemorrhage is severe, the child is dead or the mother has to work, it is advisable to empty the uterus immediately on discovery of the condition.

(b) If the diagnosis has been made after viability, it is advisable to induce labor immediately, except in the very simple cases.

THE MANAGEMENT OF LABOR

Now as to the management of labor. The principal requirements are, the control of the hemorrhage, the dilation of the cervix and the emptying of the uterus. In exceptional cases we might consider Cesarean section.

The control of the hemorrhage will depend, in a great measure, upon the condition of the cervix and the location of the placenta. If the cervix is rigid and the os is not dilated, a firm vaginal tampon should be applied. This serves the double purpose of controlling the hemorrhage and dilating the cervix. In those cases of marginal attachment with little bleeding, a good result may be had, by rupturing the membranes, applying a firm abdominal binder and giving uterine tonics. If the cervix is sufficiently dilated and the case is not urgent, the application of forceps, with gentle traction, will control the hemorrhage and dilate the cervix. In those cases, where there is profuse bleeding with slight dilation of the cervix, use a vaginal pack or perform a podalic version. By delivering one or both legs so that the knees present at the vulval orifice, the hemorrhage is quickly checked by the pressure of the buttock on the placenta, and the cervix is rapidly dilated by the legs acting as a conical wedge. A rest of an hour, at this stage, is very beneficial to the mother. In case the child is dead and the hemorrhage is controlled, it is well to let nature take her course in completing the delivery.

In the application of the vaginal tampon, the material used should be strips of sterile gauze or strips of toweling that have been thoroughly boiled. These strips should be moistened so that they can be firmly packed in the vagina. The vulvae and the surrounding parts should be rendered aseptic. In packing the vagina, the gauze should be carried well up into the culdesac, the vagina should be firmly packed and the material should extend outside to such an extent that when the T-bandage is applied, it will exert a considerable pressure. If this tampon has not accomplished its purpose in six hours, it should be removed and another applied.

The cervix may be dilated by the manual meth-

od, the vaginal pack and the Voorhee's or de Ribe's bags.

In using the manual method, the patient should be partially anesthetised, thus relaxing the soft parts and aiding in the manipulation.

The patient should be placed across the bed, with the buttocks well toward the edge. If there are no persons to hold the legs, the feet of the patient can be placed in the lap of the operator. The vulva and adjoining parts should be rendered aseptic, likewise the hands of the operator. Next, insert the index finger of the right hand into the cervical canal, and hook the cervix down in full view of the operator. Then work the left index finger into the canal. By making firm traction the os is gradually dilated, till the thumbs can be inserted and greater traction accomplished. The hemorrhage is likely to be very profuse, and may require heroic measures to control it. The patient is in good position, however, for the application of forceps or the performance of podalic version.

In cases of central or nearly central implantation of the placenta, it is better to perforate the placenta, than to loosen up a large area and try to work the hand around the edge. The hemorrhage will be less pronounced.

The application of the Voorhees' or de Ribe's bags, requires sufficient dilation of the cervix, to permit of the deflated bag being carried through the cervical canal. After the application, it should be inflated with an aseptic solution to avoid infection in case of rupture of the bag. The bag acts as a foreign body in the uterus and exerts pressure on the placenta, thereby checking the bleeding and dilating the cervix. The general practitioner is not likely to have these bags on hand, but will depend on the vaginal pack or the manual method in accomplishing the necessary dilation.

HANDLING COMPLICATIONS

The complications that should be guarded against in placenta previa are shock, infection and post-partum hemorrhage.

The treatment of acute anemia is:

1. The elevation of the foot of the bed.
2. The bandaging of the extremities for thirty minutes.
3. The administration of morphine sulphate (gr. $\frac{1}{4}$ to $\frac{1}{2}$) hypodermically.
4. The injection of normal salt solution into the vein, rectum or cellular tissue.
5. Small quantities of liquid by the stomach, one drachm every one to two minutes.
6. Nutrient fluids may be given in a few hours.
7. The direct transfusion of blood, if the hemoglobin is below thirty per cent.

CASE REPORTS

Of the five cases I have to report, the first three occurred while I practised in the country, at a place where there were no pikes, and at a time

when there was no telephone service. As a result, I was compelled to rely on my own resources exclusively.

CASE I:—Mary S., aged 28, white, American. She had had two children, the labors being normal. She had worked hard on the farm. The bleeding began the middle of the seventh month, but was not severe until two days before labor began.

I was called to the case at 1 P. M., April 10th, 1898. The messenger stated, the woman was having a baby, and that she was bleeding to death. This being my second confinement after leaving medical school, I did a considerable amount thinking during my five mile drive to the patient's home. As I entered the room, I saw a rather spare, exsanguinated woman in a comatose condition on the bed, the foot of which was elevated six inches. The bedding was covered with blood and there was a bucket with a considerable quantity of blood at the bedside. I concluded I had a case of placenta previa to deal with, without examination, and felt that quick action would be required to save the mother.

As there was no boiled water, I took a chance by washing the dust from my hands and arms in cold water from the surface well. I used carbolic acid freely. I then annointed my right hand and arm, preparatory to doing a podalic version. On exposing the parts, I observed a continuous oozing of blood from the vagina. On inserting the hand, I found the os dilated about two thirds, and a portion of the placenta protruding. The head was higher up in the R. O. A. position. I introduced the hand into the womb and secured both feet. By gentle traction with the right hand, and manipulation with the left on the fetal back, I quickly turned the fetus and brought down the legs till the knees presented at the vulval orifice. The hemorrhage was checked and the mother was given a rest of forty-five minutes to revive. As there was marked uterine inertia, I gave one drachm of ergot as soon as the patient could swallow.

The child was born dead about one hour after version had been performed. It had bled to death.

The placenta was expelled immediately. There was no infection or post-partum hemorrhage. The mother gained strength very slowly.

I administered a hypodermic of morphine sulphate gr. $\frac{1}{4}$ and strychnine sulphate gr. $\frac{1}{30}$. She was given ergot in half drachm doses for five days, and a mixture of the citrate of iron, quinine and strychnine for three months.

CASE II:—Ella B., aged 32, white, American. She had a boy three years old, and gave a history of a miscarriage between the birth of the boy and the present labor. The hemorrhage began the fore part of the eighth month with a sudden gush of blood, which was small in amount. She had several hemorrhages between that time and the beginning of labor.

I was called at 9 A. M., March 14th, 1899.

There had been a severe hemorrhage at 6 A. M., and the blood was escaping quite freely when I examined her. The vaginal examination revealed the os dilated about one-half, and the placenta of the marginal variety, was located on the left side. The head was presenting high up in the R. O. A. position. As the patient was quite weak, and I could detect no fetal life, I concluded to perform podalic version. Having checked the bleeding by the pressure of the buttocks, I allowed nature to take her course in completing the delivery.

The child was born dead from the loss of blood.

The mother had no complications, and made a good recovery.

CASE III:—Myrtle S., aged 25, white, American, primipara.

She gave a history of a severe attack of St. Vitus dance when she was eighteen years old. She had been quite nervous since that attack.

She consulted me the third month of pregnancy for a small hemorrhage, which she described as a gush of blood. She had a few hemorrhages from time to time, but none of any consequence, till she had been in labor for about four hours.

I was called at 8 P. M., November 9th, 1899, and found her in labor. The pains were coming quite strong and at regular intervals. There was some bleeding as the pains subsided. Vaginal examination revealed a boggy cervix with the os dilated to the size of a silver dollar. The head was presenting, but high up. As the uterine pains were strong, I ruptured the membranes and allowed the head to enter the superior strait. This made sufficient pressure on the placenta to control the hemorrhage. As soon as the cervix was dilated sufficiently, I applied forceps, to be prepared for any future hemorrhage that might occur. I made some traction, which hastened the dilating of the cervix.

The child was born alive. The mother had no complications and made a good recovery.

CASE IV:—Mary B., aged 31, white, Hungarian, multipara.

She gave a history of a placenta previa with a former labor. She began bleeding the middle of the eighth month.

I was called at 4 P. M., November 18th, 1906. On arriving at the patient's home, I found a midwife had been in charge for twenty-four hours. The patient had lost a great amount of blood and was very weak.

Examination showed the right arm, which was dark blue, presenting at the vulval orifice. In addition there was a prolapse of eight inches of the cord. The vaginal examination revealed the os fully dilated, a portion of the placenta protruding and the right shoulder impacted in the pelvis.

I anesthetized the patient and prepared to perform a podalic version. I had difficulty in forcing the fetus back sufficiently to permit the hand

to pass. After twenty minutes of hard work, I managed to secure a foot. By traction of the right hand on the foot and external manipulation with the left, I managed to turn the child. As the foot was brought down, the arm and the prolapsed cord receded into the womb. The hemorrhage was controlled and the mother was allowed a rest of one-half hour.

The child was born alive, but the right arm was paralyzed for two weeks. It gradually regained motion.

The mother had quite an amount of bleeding following labor, but it was eventually controlled by the use of ergot. She regained her strength slowly.

CASE V:—Ella U., aged 29, white, Slovak, multipara. She gave a history of difficult labors with all her children. She had lost small amounts of blood on several occasions, for the two months prior to the beginning of labor.

I was called at 6 A. M., January 7, 1910, and found a midwife in charge.

The examination revealed a completely dilated cervix, with a partial placenta previa. The fetus was transverse, with the right shoulder engaged in the superior strait.

After preparing the patient, she was given a little chloroform to relax the soft parts. I then disengaged the shoulder, brought the head into the pelvis and applied forceps.

The baby was born alive.

The mother had no complications and made a rapid recovery.

The medication in these cases, was ergot for a few days, and a mixture of iron, quinine and strychnine for a number of weeks. In cases of shock, I gave morphine and strychnine hypodermically.

All cases of placenta previa require close attention. It is dangerous to temporize with the mild cases. One should attempt to control the hemorrhage as quickly as possible.

802 BROADWAY.

NEW AND NONOFFICIAL REMEDIES

During January the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies: Calco Chemical Co.—Cinchophen Tablets. Hynson, Westcott & Dunning.—Globules of Benzyl Benzoate. Heyl Laboratories.—Acridine, Proflavine. Intra Products Co.—Calcium Cacodylate—IPCO. Winthrop Chemical Co.—Salophen. Morgestern & Co.—Salophen.

Value of Ohio's Health Administration System Amply Demonstrated in First Year of Operation.

Improved health supervision in the schools and better control of communicable diseases are seen as the outstanding accomplishments in Ohio's public health work in 1920—the first year of operation under the Hughes-Griswold Act reorganizing the local health machinery of the state.

Public sentiment in favor of the new system after a year's trial is indicated by the increased budgets which have been adopted for 1920 and the addition of twelve new counties to the list of those employing full time health commissioners. The total number of counties now receiving whole time service from health commissioners is 45—one more than one-half of the counties of the state.

New additions to this list for 1921, with the men who are filling their health commissioner-ships, are:

Crawford—Dr. James J. Martin.

Delaware—Dr. Albert J. Pounds.

Fairfield—Dr. V. D. Reichelderfer.

Lake—Dr. H. Kenning.

Medina—Dr. Harold H. Biggs.

Meigs—Dr. S. A. McCullough.

Monroe—Dr. W. P. Johnson.

Noble—Dr. F. W. Murray.

Paulding—Dr. C. E. Huston.

Seneca—Dr. H. L. Hinkley.

Trumbull—Dr. Bernard LeRoy.

Union—Dr. C. W. Hoopes.

The State Department of Health has made the statement that more school children received health supervision in 1920 than in all the previous history of the state. Reports from many health commissioners tell of valuable follow-up work, resulting in correction of thousands of physical defects revealed by the medical examination of the children.

County health budgets for 1921, as reported by the State Department of Health, amount to a total of \$694,543. The 1920 total was \$446,301. The townships and villages now comprised in the general or county health districts were spending about \$200,000 a year for health purposes prior to 1920, making the increase under the new system approximately \$500,000. City expenditures for health have increased very little in the same period. For the two classes of districts combined, the State Department of Health estimates the increased health expenditures at not more than \$700,000 over the former total of \$1,600,000, and the state subsidy amounting to \$200,000 leaves the net increase to the local districts about \$500,000—less than 10 cents per capita.

A recent statement by the State Department of Health makes the point that the people of the villages and rural districts were receiving little real health protection in return for their ex-

penditures under the old system, and that now, with a comparatively slight increase in outlay, they have in many counties attained protection equal to that received by the residents of most large cities. An editorial in Ohio's Health, the department's monthly magazine, says:

"We maintain—and we believe justly—that it is better economy whether in government or in personal affairs, to spend a little more and get your money's worth, rather than to spend less and get nothing. We believe the intelligent populace of Ohio judges governmental procedure by this same standard, and is entirely satisfied with the return on its health investment of 1920. The healthy, voluntary increases in many county budgets for 1920 indicate that, in these counties at least, the people were well enough satisfied to desire a little more of the same kind of health protection in 1921."

HEALTH DEMONSTRATION IN PORTAGE COUNTY

With the beginning of the new year the State Department of Health and the district health department of Portage County began to carry out the program of the health demonstration. The trachoma survey and clinic which were planned as the first items on this program were carried out successfully. Nearly 6000 school children were examined and seven positive and two suspected cases were found, giving a percentage of .11, which is to be compared with the percentage of 1.5 found in Scioto County. This indicates that trachoma is not an acute problem in Portage County, and this is probably true also of other counties with similar characteristics in the northeast section of the state. Counties with a larger foreign element such as Mahoning and Cuyahoga are not to be included in this statement.

The trachoma clinic was conducted by Drs. Lockhart and Downes and was quite successful. All of the cases found during the survey were operated and others were brought in by local physicians. In all ten cases were operated.

As soon as the trachoma survey was completed arrangements were made to begin the physical examination of all Portage County school children. Two physicians and several nurses have been engaged in this work since January 24, and a large number of examinations have already been made in Kent, Ravenna, and the outlying districts of the county. A psychologist has been employed by the State Department and is at present engaged in making group tests of the mentality of the pupils. A number of selected children are also undergoing individual mental tests.

Tuberculosis clinics are scheduled for Portage County in February according to the plan work-

ed out by the Ohio State Sanatorium, the Ohio Public Health Association and the State Department of Health. On February 16 a second clinic for crippled children was held in Ravenna, the results of which were just as gratifying as the first clinic held in 1920. By means of these clinics a large proportion of the cripples will be materially assisted and some will be completely cured.

A supervising nurse from the State Department of Health has been engaged in surveying the public health nursing situation in the county, and in conjunction with the public health nurses employed by various agencies in the county, is attempting to plan a complete program of nursing service.

The campaign to raise funds for the demonstrator, which was somewhat interfered with by the financial slump, is again in full swing, and several communities have raised their quotas. It is the plan of the State Department of Health and the district health department to proceed slowly, building up the organization with care, and carrying out each item on the program as completely as possible.

An important step was taken towards making the demonstration possible, when Dr. R. D. Wenden was appointed health commissioner of Ravenna, which had up to that time had a separate health commissioner. The whole county is now a single health unit for all practical purposes.

PHYSICAL SUPERVISION OF SCHOOL CHILDREN DEMONSTRATED

During the first few weeks of 1921 members of the staff of the State Department of Health conducted physical examinations of school children in various communities of the state with a view to demonstrating the glaring need of continuous physical supervision of pupils. Such examinations were conducted in Scio, Jewett, Cadiz, Grandview, Waverly and Bethel. The results of these examinations and the conditions revealed thereby stimulated much local interest and will undoubtedly result in greater support of the campaign for physical supervision of school children.

Of 100 children examined in Harrison County 94 needed dental attention, 54 required vaccination, 11 were undernourished, 35 were in need of refraction, 10 had defective hearing, 49 had diseased tonsils, 2 were suffering from organic heart lesions, 3 were classed as suspected tuberculosis, 18 had flat foot and 2 hernia. Should another war come when these children grow up, how many will be fit to bear arms in the defense of their country?

In Grandview Heights similar conditions were found, although the number of undernourished was smaller, fewer needed refraction, and on the whole, defects were noted in a smaller proportion of the cases.

These findings coincide with those made elsewhere during 1920. The results of these thorough physical examinations emphasize the appalling number of defects which exist in school children, and the great need for continuous and thorough physical supervision, especially in rural districts where the proportion of defects is always greater than in the city.

DIAGNOSTIC CLINIC IN SHELBY COUNTY

A very successful diagnostic clinic for children was held at Sidney in Shelby County on February 3, under the auspices of the State Department of Health, the district health department and the Shelby County Medical Society. The consulting physicians were Dr. B. G. Chollett of Toledo, orthopedist, and Dr. H. T. Thornburgh, State Department of Health, psychiatrist. Sixty-one patients attended the clinic, of which 39 were orthopedic and 26 general, six of the patients being counted in both classes. The orthopedic cases comprised tuberculous, dislocated and ankylosed hips, old fractures, infantile paralysis, hemiplegia, club-foot, charcot joint, spastic paralyzes, bow-legs, hydrocephalus, etc. Among the general medical cases was one active case of tuberculosis, three feeble-minded and two children blind in one eye. The consulting physicians talked over the cases with the attending physicians and gave advice as to treatment. Among the thirty-three visitors to the clinic were Dr. R. C. Austin, orthopedist of Dayton; the judge of the juvenile court of the county; the superintendent of schools; the superintendent and matron of the children's home; a representative of the State Board of Charities, health commissioners from neighboring districts; visitors from Dayton and members of the medical society of Shelby County, who held a meeting for the purpose of attending and assisting with the clinic. A great deal of interest was aroused by the clinic, and as a result of it, it is probable that a clinic will be held at or near Dayton in the near future to care for cases in the rural districts of Montgomery and neighboring counties.

The Shelby County clinic, with others which preceded and will follow it, comprise a part of the State Department of Health's program to care for crippled children. The census of crippled children being taken by the health commissioners of the state is proceeding satisfactorily, about 1,500 cases having been listed to date. The Rotary clubs of Ohio are assisting greatly in this work. Clinics are being arranged as rapidly as possible so that every cripple may have the advantages of expert orthopedic service available in the state. One was held by the Bureau of Child Hygiene of the State Department of Health in Portage County on February 16 and one scheduled for Putnam County on March 10.

“Jullundur” Smith of India

Derrick T. Vail, M. D., F. A. C. S., Cincinnati

Editor's Note.—Those who attend the coming State Meeting in Columbus will have an opportunity to see in the life, as it were, one of the characters of India as picturesque, romantic and thrilling as any gracing the pages of Kipling. After all, however, it is not remarkable that occasionally the far-flung corners of the earth give to the profession an outstanding figure. Such places provide limitless clinical opportunities and those who accept them are thrown upon their own resourcefulness and if they conquer the problems involved they usually achieve conspicuous eminence. Perhaps in his day no one surgeon has given more service than has “Jullundur” Smith to the people of the Punjab during the 30 years he has cared for them and cured their many ills. Pending retirement from the Indian Medical Service the profession of the English speaking world is striving to show him the honors to which his work has entitled him. If Smith's life and career prove anything it is that a great physician must be a man to all men, possessing a knowledge of all things as well as the ability to create success from the ordinary things at hand.

LIEUTENANT-COLONEL HENRY SMITH, C. I. E., I. M. S., the famous general surgeon and ophthalmologist, is coming to tour the United States in the spring of 1921. He is at present on leave of absence pending retirement from Indian Medical Service. He will be welcomed as an attraction for many medical societies

where he established his fame as a cataract surgeon. All over India he is known as “Jullundur Smith.” On the steamship en route to India I met many English passengers who were returning from vacations and every one would speak of him as “Jullundur Smith.” Some of his more intimate friends called him “Smut” or “Smuttie.”

The layman's estimate of a professional man is interesting if not always accurate and the passengers whom I quizzed as to Smith's characteristics nearly all said he was a “rough diamond,” a plain and blunt Irishman who was honest, fear-



FIGURE 1. Lt.-Col. Henry Smith C. I. E., I. M. S.



FIGURE 2. Public well in front of old Jullundur Hospital

less and unconventional. They said he did things differently, that he was an iconoclast but was the idol of the people of the Punjab.

He met us (Dr. and Mrs. D. W. Greene of Dayton were with me) at the station at Jullundur City at midnight of September 16, 1909, and I found him a soft-spoken giant, very gentle and kind, not at all fiery but serious and quiet with a winning personality.

At nine o'clock breakfast the next morning after I arrived I inquired for Smith and was informed he always left for his work at seven and that I would see him at the hospital at ten. I never saw him at any time in his home till five o'clock evening tea, “breakfast” he would call it for he ate but little during the day.

in our country, for his fame has preceded him, and every one desires to see the man who has done 50,000 cataract operations and numberless other operations of all kinds, and to hear what he has to say and “size him up” as the saying goes.

Smith is an interesting character from many angles of view. It was the writer's privilege to study him and his ways at close range in the fall of 1909 in the city of Jullundur, Punjab India,

At ten o'clock I arrived at the old Jullundur Hospital. It was like a long cow shed one story high. In front was a public well around which Hindus were bathing, a crowd was near the arched entrance, a horde of poverty-stricken, emaciated humanity in every stage of misery and apparently representing every disease in the catagory! Men, women and children, blind, lame, sick, sore-eyed and squalid were there, apparently hundreds of them. As I approached they formed a lane for me to pass through and the men made profound bows and salaams to me. Smith was standing at the entrance door of the low ceilinged operating room examining patients as they filed in past him. Dr. C. F. Clark of Columbus who had performed over 100 operations for cataract at Smith's clinic before I arrived, stood looking over his shoulder at the patients. Smith was bareheaded, coatless and open-vested and his shirt sleeves were rolled up to his elbows.



FIGURE 3. Receiving room where patients applied for admittance to the old Jullundur Hospital.

He held between his lips a Burmah cheroot which he never removed and rarely puffed but which burned with a long ash and a curling line of smoke. He would turn the eyelids, take the pupillary reaction with his open palms and the ocular tension with the tip of his index finger against the eyeball.

His assistant Nur Ali, a Mohammedan, in white turban and white long coat, trousers and bare feet stood at his side, while Diwanali, a capable native Mohammedan M. D., house physician, was busy operating for trachoma in the adjoining operating room. Smith would say "Trachoma"—"Cataract"—"Glaucoma"—"Dislocated lens"—"Detachment of the retina"—"Retinitis pigmentosa"—"Choroiditis"—"Iritis" or "Ulcer," as the patients filed past him. He would dispose of 100 cases in an hour examining them in this way. The pupil test and tension alone revealed to his eyes the presence of operable cataract.

At the hospital he used no ophthalmoscope, no dark room, no focal illumination, no perimeter, no color yarns, no test cards and no mydriatic

but in his bungalow he had a full equipment for thorough examination of special or private cases. Patients to be operated on were so sorted that the cataract cases were in one bunch, the iridectomy-for-glaucoma cases in another, the entropion cases in still another and so on. They squatted in bunches in various parts of the operating room waiting each for his turn to be operated upon. That first morning there were eleven cataract operations to do. There were three operating tables in a row, a patient being pre-



FIGURE 4. The two instrument pans and sterilizer and the operating stool in the old Jullundur Hospital.



FIGURE 5. View of one wing of the old Jullundur Hospital as seen from inside the hollow square.

pared on each and he did the eleven cases within thirty minutes!

After they were finished Smith said to me "What do you think of the operation?"

I replied "There is nothing to it!"

This surprised him and he said "What do you mean?"

I answered "There is nothing to it—an incision upward at one stroke, an iridectomy at one pass, the lens shelled out by a single push and there you are!"

It was true, an operation took not over two minutes' time to perform.

Smith said "As you say there is nothing to it, but try it and see."

I noticed the quiet Mohammedan, Nur Ali, and

the amazing dexterity he showed in *assisting* in the operation. I learned afterward that Nur Ali was not a doctor, that he had no medical training whatever, excepting what Smith had given him and that his only school was the school of experience. His sharp eyes saw everything, his tongue rarely stirred, he did things and said nothing.

Smith cares little for dress or personal appearance. He cares everything for sterile instruments. His argument is, the gown the surgeon wears is no advantage to the operation but clean instruments are. He never uses an instrument a second time on the same case without re-sterilizing it.

There were no trained nurses at Jullundur. There were no kitchen departments, no dishes, trays or napkins and but few towels for patients. Smith said, "The blind patient wants his own family to feed and nurse him, strangers excite him and ruin his eyes," and so the patient's own



FIGURE 6. Pitched tents to accommodate the overflow of hospital patients in the hollow square of the old Jullundur Hospital.

family camped out in tents on the hospital grounds or under the veranda and cooked the humble meal and fed the patient in the way he was accustomed to be fed. He slept in his own blanket and had his own bowl to eat out of. The hospital furnished bare beds without mattresses for patients. These beds had woven tape in lieu of springs to lie on. The dressings were left undisturbed for a week, sometimes ten days, because Smith says if there is no pain nothing is gained by looking at an eye after the cataract operation. "If any thing is wrong what can you do the first seven or nine days? Nothing that does any good. Eyes are lost by much meddling dressing. If the patient has pain the eye is inspected, as atropine may be required or a hernia of the iris abscised but the atropine solution may be foul and the eye may be shocked or hurt by dropping it in and the real good it does is doubtful, better give the patient ten grains of blue mass and a grain of opium and let him alone for a while at least."

There were on an average 450 patients daily in Jullundur Hospital, most of them cataract cases. Think what it means to provision and nurse a sick population of that size. Smith disliked to ask his government for funds, he managed to get along somehow without much expense. He told me that the cost to the government for maintaining the old Jullundur Hospital was in the neighborhood of \$1,800.00 a year! This sum was used for drugs and sundries, very little expended on sheets, towels and gauze. The cotton was grown in nearby fields and picked by the natives, the thread used was horse hair plucked on the



FIGURE 7. Smith's bungalow in Jullundur City not far from the old Jullundur Hospital.



FIGURE 8. The new Victoria Memorial Hospital built by Col. Smith in 1909 to succeed the inadequate old Jullundur Hospital. This shows a part of the front building and the end of one of the side buildings with large hollow square or court enclosed.

spot and sterilized in big jars by Smith's attendants. Horsehair makes an ideal suture, it knots beautifully and is tough, one hair for suturing the conjunctiva or a small skin wound and several in a bunch for mastoid and big wounds. He used catgut for intra-abdominal sutures and ligatures but chromatinized them himself. Many of his surgical instruments were made from pictures and descriptions in instrument-catalogues by the ingenious village blacksmith and stronger and better than the "store instruments" in many instances. They were however very few in number, for instance: the mastoid set consisted of a

cooper's mallet, a common chisel six inches long and evidently made from a buggy spring (which Smith would sharpen on a stone lying on the table), a bone gouge, a scalpel, a probe, a retractor, one large curved needle, horsehair sutures, one hemostat which also served for a needle holder, and that was all.

The anesthetic for general surgical operations was chloroform vapor. Nur Ali would squeeze the hand bulb and drive the current of air through the chloroform in a bottle to be delivered through an outgoing tube in the mask as vapor. Smith said he had never had a death from chloroform and would not bother with an outfit like a pipe organ to put a patient under anesthesia. He did



FIGURE 9. Tour of Inspection. Sir Louis Dane, Governor General of the Punjab, and his wife Lady Dane and suite visiting the new Victoria Memorial Hospital, Jullundur, Durbar day, October 25, 1909. Col. Smith leads the procession dressed in Prince Albert coat, gray trousers, silk hat, etc.



FIGURE 10. "Rubbernecks" watching Smith operate.



FIGURE 11. Corner of Hospital building at Amritsar India, where Smith has worked since November, 1909.



FIGURE 12. Modern operating room in Amritsar hospital showing two of the three operating tables in a room where Smith operated since 1909.

abdominal sections and limb amputations, ectopic pregnancies and breast amputations, in fact all the surgical operations, without much use of gauze sponges; simply had the assistant to direct a stream of 1-2000 warm bichloride from a ten gallon jar suspended from the ceiling over the operative field and use his own fingers to wipe away clots and discharge. The surgical results were equal to any I have seen in the world. I saw not a single septic wound, nor a stitch hole abscess.

He did not believe in private operations. The doors were all open. Many patients were waiting for operation in the same room. The big window that furnished light had clear glass panes and were low so that a crowd of native "rubbernecks" could see, if they cared to, what was being done. Smith said "Let them all see that there is no witchery being practiced." He had the confidence of the people and they trusted and loved him.

When Smith saw the need of a larger and better hospital he did not appeal to the government for funds but went to the neighboring Rajahs and native merchants and citizens who could afford to give and asked for donations. They gave

\$75,000.00. He employed no European architect, I am told, and rejected all contractors' bids for labor and material for he said they wanted too much money, and made his own brick on the grounds using native labor throughout. He told me the building cost little more than half what the contractors had bid. The Victoria Memorial Hospital of Jullundur with a capacity for over 500 beds and which was opened October 25, 1909, stands a beautiful monument to his skill and genius. On November 1, 1909, only a few days afterward, he was transferred to a better and more lucrative field, viz., Amritsar one hundred miles further north, where there was a beautiful hospital already built, and everything provided on a larger scale.

The inhabitants of Jullundur saw him depart with sorrow in their hearts and tears in their eyes. A spontaneous subscription was raised among them to defray the expense of employing a European artist to paint his portrait to hang in the administration building of the new hospital he had built and I was told that everyone high and low, rich and poor gave something toward that fund. In addition to his hospital work at Jullundur, Smith had charge of the district jail and workhouse as well as other public institutions which he visited daily. He was a busy man and had no time for conventionalities. He had work to do and did it well for thirty years. He is now past sixty and has earned a rest.

Smith is well informed in many things outside of his profession: politics, religion, astronomy, mechanics, philosophy, poetry, botany, zoology, the classics ancient and modern, and is a delightful and instructive talker on almost any subject. He told me the best way to become a good surgeon was to study all things and learn all methods and then chuck them and go out after your own ideas.

Smith will be welcomed as a guest at the seventy-fifth annual meeting of the Ohio State Medical Association in Columbus. He will deliver the oration on ophthalmology before the Eye, Ear, Nose and Throat Section, May 4, 1921, following which a cataract symposium will be given in his honor.

Vital Statistics

More boys than girls were born in Ohio during the five-year period 1915-1919.

During the same period the number of children born to native Ohioans and to foreign-born persons decreased.

The number of children born to natives of the United States but not Ohioans increased.

During the five years 53,710 newborn children did not live to see their first birthday anniversary.

These are interesting facts in data recently compiled by Dr. U. G. Murrell, chief of the State Bureau of Vital Statistics.

Dr. Zinke on "How to Write a Paper"

At this time when many members of the State Association are preparing papers to read before the coming annual meeting in Columbus, a word on the importance of making these papers creditable from every standpoint is fitting. Recently Dr. S. J. Goodman, chairman of the program committee for the 1921 meeting, came across a splendid treatise on this subject written by Dr. E. Gustav Zinke of Cincinnati, and recognizing its great value, sought and received from Dr. Zinke his permission to have it reproduced in *The Journal*. Dr. Zinke has had wide experience in the editorial field and the following paragraphs from his pen are filled with sound advice which should be extremely helpful to medical essayists:

The ability to speak well and to write attractively is a gift. It is a talent, however, that may be much improved by painstaking practice in speaking and writing. It is well known that some of our most successful practitioners and skillful operators are poor speakers and not very good writers, while there are others who possess the talent of expressing themselves well, but who, although they are well educated, are frequently most indifferent as to how they speak and write.

A paper carefully and attractively written is more likely to be read by the average reader than one carelessly prepared and couched in poor English. Thus it happens that a paper of great interest and practical value is frequently disregarded by the reader solely because its composition is faulty, its language imperfect and uninviting. To secure the attention of the medical profession for the perusal of our transactions they should be, as nearly as possible, free from criticism, at least from a literary point of view.

As secretary of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons it is my duty to edit every paper presented at each session before it is given to the editor of the journal. A well-written paper does not, as a rule, require more than an hour or two of editorial scrutiny. A paper upon which little or no care has been expended, however, not infrequently requires from twelve to fourteen consecutive hours of the most intensive effort on my part to make it fit for presentation to the editor and printer. Occasionally I have been obliged to spend every leisure hour at my disposal for one whole week upon one manuscript alone.

I am sorry to state that the majority of the papers presented at every annual meeting show sometimes an extreme lack of care in their make-up, not only in the use of imperfect English, but also in the disposal and consideration of the sub-

jects with which they deal. A paper written just the day before it is to be read is never a good paper; I care not how able and well-trained its author may be from a scientific and literary standpoint.

To write a good paper you must first select the subject you desire to present for discussion; the next step is to examine the literature of the matter to be treated, then to compare the experiences and studies of others with your own. This done, make your dispositions and write out in detail what you have to say on each of them; lastly, draw your conclusions.

After the manuscript is completed, put it aside for a week or two, but continue to think of the subject, making a note now and then of what you would like to add or omit. At the end of this period, read the manuscript a second time, and you will be surprised at the many changes, additions, omissions, and transpositions you will find it necessary to make. You may even marvel how it was possible for you to write as poorly as you did.

Again the paper, in its improved form, is locked away for another re-reading at the end of a week or two; and, when you read it for the third time, you will find words, phrases, and sentences that may be changed to advantage to make the subject-matter clearer, the organization more compact, the diction more forceful and pointed.

The next and final reading should be devoted to "polishing" the paper. Remove every superfluous word, phrase, and sentence. See that your adjectives are properly selected and correctly shaded, and that your language is pure, simple, effective, and inoffensive to those who may disagree with you.

After you have thus labored to do your best with the manuscript, submit it for careful perusal to one who is a master (or nearly so) of the English language, and ask him, or her, to point out further defects and shortcomings, especially with reference to syntax, punctuation, paragraphing, and diction.

A paper thus prepared will be at once an honor to you and a credit to the association. Every fellow should have the ambition, and consider it his duty, to raise the standard of our efforts and to place the association upon the highest plane of efficiency, and thus increase its usefulness to the greatest possible extent.

PHARMACISTS MEET

The forty-second convention of the Ohio State Pharmaceutical Association was held in Columbus, February 8-9. The program covered questions of legislation, taxation and prohibition.

OHIO PUBLIC HEALTH NOTES

—A physical examination of every World War veteran, to show the country its responsibility in caring for men disabled in service, has been proposed by Dr. Haven Emerson, who conducted the recent health and hospital survey in Cleveland and is now chief medical adviser and assistant director of the Bureau of War Risk Insurance. He suggests the experiment be made in Illinois.

—More rigid enforcement of city laws requiring sterilization of all utensils in which food is served in restaurants and at soda fountains will be carried out in Dayton in the coming months through an educational campaign in this line. The city health department now has ten inspectors, part of whose duties will be the inspection of eating houses.

—Dr. C. H. Hamilton of Lancaster has been re-elected to the position of city health commissioner on a part-time basis at a salary of \$960 per year.

—Weighing and measuring of the 1,322 pupils in the elementary and junior high school grades of Bucyrus found 800 underfed, and 221 of this number ten per cent. or more underweight. Remedial measures will be instituted including instruction classes in diet and health habits and serving of light lunches during school hours to those underweight.

—With the beginning of February Drs. Carroll, Giles and Joseph DeCourcy of Cincinnati organized what is to be known as the DeCourcy Clinic, for group diagnosis and treatment. The clinic consists of sixteen rooms and represents the specialized branches of surgery and medicine. Dr. Ira A. Abrahamson, who has for many years been associated with Dr. Robert Sattler, is a member of the staff of the new clinic.

—Hamilton Board of Education has raised the salary of the local school physician from \$2,000 to \$2,500 per year.

—Directors of the Clark County Public Health League, recently organized to coordinate all the public health work formerly done by several organizations, include Dr. William P. Ultes, representing the Clark County Medical Society, and Mr. George V. Sheridan, representing the Clark County Red Cross Chapter. At the initial meeting resolutions were adopted opposing the bill providing for a separate chiropractic licensing board and supporting the bill providing for physical education in the schools.

—A series of ten lectures on first aid is being given by Dr. F. M. Pitton of Hamilton for the benefit of local industrial workers. The Industrial First Aid Handbook is used as a text book for this course, which is being attended by representatives from each plant.

Teachers Urged to Co-operate

In the February issue of the monthly bulletin of the Dayton Health Department, Dr. A. O. Peters, local health commissioner, made a direct appeal to the school teachers of that city to assist in safeguarding the health of the pupils under their supervision. No one outside the home occupies the strategic position that the teacher holds in the scheme of the child's life and is capable of wielding greater influence in the molding of its character and habits, including those pertaining to health. Therefore, Dr. Peters' plea, reproduced below, to the pedagogues of his city to keep a watchful eye on the physical wellbeing of their charges is particularly timely just now, when health protection is an increasingly important problem.

"The social needs of the times have greatly multiplied the interests of the school teacher as compared with conditions existing twenty years ago. With Red Cross drives, old clothing collecting campaigns, ticket selling campaigns, savings bank duties, etc., etc., the teacher has much to look after besides her strictly professional duties. And, of course, the latter are heavy enough to keep her busy. But we have reached a stage of social development to such a degree of being "our brother's keeper," that all these duties have become a necessary adjunct to the teaching profession. The conscientious teacher cannot evade any responsibility that will make of the school an agency for bettering world conditions as well as a means of teaching the individual pupil in technical matters.

"Along with the growth of these adjuncts to the teachers' responsibilities there has gradually developed the health preservation movement in the schools. When the writer taught fifty pupils in an ungraded country school twenty-five years ago, no attention was paid to mouth breathing, near-sightedness, underweight, stooped shoulders, hollow chest, decayed teeth, etc.; and even measles, chicken-pox and mumps cases were not excluded from school. The latter were considered inevitable occurrences in the life of the child, and the sooner over, the better.

"Now this situation is entirely changed. It has become a primary duty of the teacher to assist in supervising the health of the child. The draft, a few years ago, showed that two-thirds of the young men of the country were unfit for military service. In our own city work we find only one man out of five of those who apply for positions of firemen and policemen that are physically fit for this duty.

"So there is a two-fold reason for guarding the health of school children. In the first place, there must be a healthy body to house a healthy mind. It has been found in our own experience in Dayton, that mal-nutrition and physical defects handicap the child in his mental development. This, then, coupled with the necessity that each generation should be healthier and stronger than the preceding, if we wish to maintain our na-

tional independence, throws a great responsibility upon the teacher. She should assist the school physicians and nurses in every way she can in improving the health of school children. This responsibility is equally important with the responsibility for the child's mental and moral development."

Small Advertisements

Wanted—Physician desiring good location to purchase home and office of late physician. Property is modern and in good location, and the deceased physician had a large, well established practice. Physician is needed in the community. Address A. C., care *The Journal*.

Location for Physician—Splendid location in Toledo used by a physician for many years. Property for sale. For particulars address Mrs. Katherine Ayers, 9 Hattersley Apts., Toledo.

For Sale—Or will exchange locations. \$5,000 home, 10 rooms, two office rooms, electricity, gas, furnace, barn, cement walks; located in railroad town of 400 population, 30 miles from Dayton, excellent pikes, churches, schools, bank, farms; in tobacco country. Practice \$4,000, one competitor. Address W., care *The Journal*.

Physician Wanted—To locate in village of Somerdale. There are four towns nearby without medical service and this is a good opening. Wm. M. Border, Postmaster, Somerdale, Ohio, will be glad to explain conditions to any physician interested. He says there is serious need of a physician in the community.

Wanted—Rectal specialist or physician who wishes to engage in rectal work to take practice established for many years. Excellent opportunity. Details on inquiry. H, care *The Journal*.

For Sale—Physician's property and location. Will sell at sacrifice my property consisting of ten-room house, including two office rooms, wash room, coal house adjoining; in good condition, newly painted. Barn, garage and corn crib combined, chicken house, fruit trees of all kinds, almost an acre of land, well fenced with eight foot wire. Located on cross street in town of 200 population; large territory, excellent people, good pay. Good roads. Best location in Warren County for one physician. Full particulars on request. Dr. L. G. Brock, Waynesville, Ohio.

For Sale—Forty-five hundred dollar village and country practice in the best agricultural section of Ohio, for the price of house. Good roads, partly modern house, good out buildings. Collections A No. 1, almost 100 per cent. Only physician in village. Small payment down required, balance in payments. Address P. S., care *The Journal*.

OFFICERS ELECTED BY HOSPITAL STAFF

The medical and surgical staff of St. Vincent's Hospital, Toledo, elected officers at its annual meeting on February 10. Dr. C. D. Selby was re-elected chief of staff, Dr. Thomas Crinnion, vice-chief, and Dr. J. F. Wright, secretary. The directors were chosen as follows: surgery, Dr. Thomas Crinnion; medicine, Dr. C. W. Waggoner; obstetrics, Dr. Walter Brand; eye, Dr. Frank Jacoby; ear, nose and throat, Dr. E. C. Unckrich; bronchoscopy, Dr. Thomas Hubbard; pediatrics, Dr. J. F. Wright; genito-urinary, Dr. C. M. Harpster; dermatology, Dr. J. L. Murray; roentgenologist, Dr. John Murphy; proctology, Dr. J. M. Frick; anesthesia, Dr. E. I. McKesson; orthopedics, Dr. B. G. Chollett; dentistry, Dr. R. Vollyamer.

 * ACADEMIES AND *
 * COUNTY SOCIETIES *

CLEVELAND

(Lester Taylor, M. D., Secy.)

The 167th regular meeting of the Academy of Medicine of Cleveland was held January 21, 1921, with the president, Dr. W. B. Chamberlin, in the chair. Minutes of the previous regular meeting were read and approved, as were the minutes of the previous Council meetings.

In the absence of the vice-president, the secretary took the chair while Dr. Chamberlin read his paper on "The Relation of the Internist to the Diseases of the Middle Ear and the Mastoid Process." He advocated early paracentesis of the ear to avoid mastoid involvement. The paper was discussed by Drs. Pitkin, Maschke, Updegraff and Sager.

Dr. Howard Karsner then introduced the guest of the evening, Dr. Francis Peabody, of the Peter Bent Bringham Hospital, Boston, who spoke on the "Clinical Significance of the Vital Capacity of the Lungs." Dr. Peabody outlined the history of Spirometry and the contributions it had made to clinical medicine. He demonstrated by slides and charts the value of this method in cardiac diseases. Discussion was opened by Dr. C. F. Hoover followed by Drs. Roy Scott, Pierce, Stewart, Sager, Wiggers and Christie, and was closed by Dr. Peabody.

The proposed amendments to the constitution were submitted to the Academy and it was moved that the amendments as voted upon by the Council should be accepted and submitted to the vote of the Academy at the next regular meeting.

Attendance 122.

The 149th regular meeting of the Clinical-Pathological Section of the Academy of Medicine was held at Mt. Sinai Hospital February 4. Program:

Demonstration of Case of Congenital Diaphragmatic Hernia, by Dr. Clara Davis; Demonstration of Two Cases of Bone Syphilis and a Case of Progressive Muscular Spasticity, by Dr. W. G. Stern; Demonstration of Surgical Cases, by Dr. Wm. E. Lower and Dr. M. E. Bland; Demonstration of Medical Cases.—1. Encephalitis, by Dr. A. S. Maschke; 2. Angina Pectoris, by Dr. S. S. Berger; Report of Case of Carcinoma of Pharynx Complicated by Vincent's Angina, by Dr. A. Strauss; Demonstration of Ophthalmological Cases, by Dr. S. Wolfenstein; Demonstration of Pathological Material, by Dr. C. E. Swanbeck; Demonstration of Hearts Injected with India Ink to Show the Bundle of His and Its Branches, by Dr. Harold Feil.

The 105th regular meeting of the Experimental Medicine Section was held February 11. Program:

Production of Experimental Edemas by Aio-

matic Diamines: (Demonstration), by P. J. Hanzlik, M. D., and A. Irvine, B. S.; Liberation of Free Salicylic Acid from Salicylate in the Circulation, by P. J. Hanzlik, M. D.; Thyroidectomy and Partial Thyroidectomy with Relation to the Production of Hemolysis, by E. E. Ecker, Ph. D., and H. Goldblatt, M. D.

TOLEDO

(J. F. Wright, M. D., Secy.)

Plans to safeguard the health of Toledo school children were discussed at a meeting of the Toledo Academy, February 4.

These talks were given: "Relation of Health to Education," W. B. Guiteau, school superintendent; "The Scheme and Application of Health Supervision," Dr. P. B. Brockway; "Plans for Teaching Health Habits," Dr. Marion Weightman; "Children's Teeth," Dr. D. A. Elwell; "Our Boys and Girls Who Must Work," Dr. W. A. Neill; "Concerning Those Mentally Deficient," Miss Anne Cowden; "Some Have Eyes and See Not," Miss Genevieve Givens; "Others Have Ears and Hear Not," Miss Nora Hisey; "While Others Have Twisted Legs and Distorted Bodies," Miss Nackie Wright.

COLUMBUS

(James A. Beer, M. D., Secy.)

"Sterilization of the Unfit" was the title of the paper presented before the January 24th meeting of the Columbus Academy by Dr. E. J. Emerick, superintendent of the State Hospital for Feeble-Minded, and discussed by Drs. W. D. Deuschle, J. M. Rector, and Henry H. Goddard, director of the State Bureau of Juvenile Research. The names of thirteen new applicants for membership were presented and voted on favorably.

Printed in italics at the top of the announcement for the meeting of February 14, the line "Jug Not That Ye Be Not Jugged" very properly was followed by a prohibition program which included consideration of the subject from a number of angles. Prohibition Director J. A. Shearer spoke on "The Prohibition Law and Its Regulations, and Professor Edward Speas, dean of the College of Pharmacy, Western Reserve University, on "Prescriptions, Intoxicating and Otherwise." Mr. Dustman of the Anti-Saloon League, gave a talk on "Cooperation," which was well received.

By motion and unanimous vote leaving determination of the anesthesia controversy entirely in the hands of the Policy Committee of the State Association, the Academy laid on the table the resolutions on this question submitted by Mr. T. T. Frankenberg, executive secretary of the National Anesthesia Research Society.

CINCINNATI

(O. J. Seibert, M. D., Secy.)

The following resolution adopted by the Cincinnati Academy of Medicine was submitted to *The*

Journal for publication under date of February 8:

RESOLVED: That the Academy of Medicine of Cincinnati is opposed to the use of nurses in the State of Ohio, as anesthetists.

RESOLVED: That suitable legislation be presented in the present session of the Legislature to repeal the present act authorizing nurses to administer anesthetics under the direction of the surgeon, since such action cannot be carried out with due consideration to the sanctity of human life.

RESOLVED: That the delegates of this society and the councilor of this district are hereby instructed to vote against any proposal of the State Society to stand neutral or favor any action of the State Society continuing supervised anesthesia.

RESOLVED: That the secretary of this society be instructed to forward a copy of these resolutions to the president of the Ohio State Medical Association and to the editor of *The Ohio State Medical Journal* with instructions to publish the same in the next issue; also that copies be sent to all legislators of this district.

FIRST DISTRICT

Butler County Medical Society, in session at Hamilton, January 19, listened to a paper on "Radium, Its Indications in the Treatment of Malignant and Other Diseases," by Dr. C. J. Broeman of Cincinnati. The paper was illustrated with lantern slides. Dr. C. B. Keller spoke on "Intussusception."

Fayette County Medical Society had as its guests on January 13 Drs. Robert Carothers and C. S. Rockhill of Cincinnati who discussed "Tuberculosis." The former spoke on tuberculosis of the bone and the latter gave an illustrated lecture on the pulmonary type.

SECOND DISTRICT

Clark County Medical Society met in the Chamber of Commerce, February 14. Minutes of the previous meeting were read and approved. A communication from Mr. T. T. Frankenberg of the National Anesthesia Research Society, regarding the nurse anesthetist was tabled on motion of Dr. Patton, duly seconded. Drs. Cromer, Evans and Hutchings were appointed to the auditing committee. Drs. Joseph Webb and N. L. Burrell were elected to membership, and Dr. J. O. Starr was received on transfer from Darke County Society. The secretary was instructed to confer with dentists who had indicated a desire to become associate members.

The program for the evening was a symposium on gall stones. Dr. P. F. Anzinger took "Differential Diagnosis"; Dr. C. L. Jones "Pathology"; Dr. H. B. Martin "Medical Treatment"; and Dr. W. A. Ort "Surgical Treatment." Discussion by Drs. Burgman, Titlow, Bell and Roush. Attendance 21.—R. R. Richison, Secretary.

Greene County Medical Society held its regular monthly meeting in Xenia, January 6, with 15 members present.

Discussion of the nursing situation was opened by Dr. Ben R. McClellan and after consideration the secretary was instructed to collect further data on the subject.

Dr. R. K. Finley reported that, according to *The Journal of Gynecology and Obstetrics*, practically all samples of blood from persons previously injected with salvarsan gave a positive Wassermann test. He also reported evidence tending to show that alcohol is not an antidote to carbolic acid, but that it does annul its caustic action. Dr. Savage declared that the anesthetic effect of alcohol and carbolic acid alike explained the antidote action which is apparent only and not real. A case of lues which did not give a positive Wassermann test with one sample of spinal fluid and several of blood was reported by Dr. Finley.

In a case of carbuncle of marked severity in a not very rugged man past middle age, where the usually satisfactory treatment of applications of phenol deep into the pus pocket did not arrest the progress, Dr. R. K. Finley reported that treatment by thoroughly flushing the lesion with methylene blue solution in water (1 to 200) followed in a few minutes with picric acid solution in water (1 to 400) produced almost unheard of results. He recommended this procedure for the treatment of all abscesses. Dr. Galloway verified the excellent results in this case and reported another case of injury to a finger with resulting abscess formation and sepsis, in which the same method of treatment produced remarkable results.

Dr. H. C. Messenger was the essayist of the occasion and his subject was "Care of Premature Infants."

He stated that "partus immaturus" is steadily becoming more common, and that very little progress has been made in its treatment regardless of considerable research. Statistics show that nine per cent. of all births are in this class. Because of the fact that the number of months that children are held in utero is not recorded in the statistics of Greene county, it is impossible to determine the exact percentage of such cases here. However, there were about 30 cases in 1920 with nine deaths. Most infants weighing less than five and one-half pounds and measuring less than seventeen and one-half inches are premature. Statistics show, however, that seven full-term children weighed but four and one-half pounds each. Two fetuses which were born at 21 and 28 weeks respectively are reported to have lived. *The British Medical Journal* reported an eighteen-ounce infant that grew to healthy childhood.

The principal causes are a jolt to the mother such as from a fall or horseback riding and such diseases of the mother as syphilis, nephritis, cardiac, tuberculosis, scarlet fever, pneumonia, in-

fluenza, variola, measles, typhoid, gonorrhea, bubonic plague.

Congenital asthenia is somewhat confusing in diagnosis. The actions of the child such as sucking, active movements, gain or loss in weight and general appearance are valuable points upon which a prognosis is made. If these feti live a mild affection serves to carry off many of them early in childhood.

The care of premature infants depends upon the study of each individual case and the proper measures taken according to the requirements in an individual case. Accordingly the incubator is little used any more. Proper warmth, feeding and protection from infections and other harmful influences are paramount in the care of these cases. The temperature should be maintained at between 85 and 90 degrees Fahrenheit and the fetus surrounded with cotton or other non-irritating material. A daily bath of warm olive oil is recommended. Mother's milk is highly desirable and should be diluted. If the child cannot suck a breast pump is employed and the child is fed with a spoon, dropper or special feeder. The frequency of the feeding is regulated by the ability of the child to take nourishment.

In conclusion three points are emphasized (1) the length of the fetus is the most important point in determining its prematurity, less than seventeen and one-half inches being premature, (2) mother's milk diluted and fed with a dropper or spoon is essential to the child's life and (3) attention to details in a given case is necessary to the successful handling of these cases.

Discussion.—Dr. W. H. Finley stated that to him the character of the epidermish had always been a valuable index to prognosis because of its ability to prevent heat loss from the body. He also remarked that the upper startum of cow's milk produced a light flocculent curd under digestion or treatment with hydrochloric acid more nearly like that from human milk than any other part of cow's milk. He further emphasized the statement of the essayist that proprietary foods as a routine are bad and he illustrated with a case from his experience.

Dr. Grube stated that after the fifth month a fetus should be reported as a birth and a death, that after the fetus had lived for a short time the cause of death should be given and prematurity should be mentioned as contributory.

The society enjoyed an equally splendid program on February 3, when the subject for consideration was "The Group Idea in Medicine." In papers on "Surgery," "Pediatrics" and "Orthopedics," by Drs. Ben R. McClellan, A. C. Messenger and R. K. Finley, respectively, the advantages and disadvantages of the plan were thoroughly covered. The dental side was presented by Dr. Eber J. Reynolds in a paper on "Focal Infection with Relation to General Disease." Dr. Galloway, the president, ex-

plained the provisions of the Sheppard-Towner bill pending in the federal congress. He also presented to the society papers which are of much value in connection with medical history, being copies of the defense of one John Americrombee who was sued for \$25,000 in 1825. A program committee for the year 1921 was appointed, consisting of Drs. Reyburn McClellan, Hartinger and Denser.—C. H. Denser, secretary.

Darke County Medical Society's program on February 10 was one of the most practical and useful the society has ever enjoyed. Drs. B. C. West and A. F. Shepherd of Dayton spoke extemporaneously on "Heart Murmurs" and "Epilepsy," arousing a great deal of interest and lengthy discussion of each subject. Twenty-four physicians were present.—B. F. Metcalfe, Correspondent.

Miami County Medical Society, in session February 3, adopted the following resolution by unanimous vote:

RESOLVED: That the Miami County Medical Society is opposed to the use of nurses in the State of Ohio, as anesthetists.

RESOLVED: That suitable legislation be presented in the present session of the legislature to repeal the present act authorizing nurses to act as anesthetists under the direction of the surgeon.

RESOLVED: That the delegate of the Miami County Medical Society and councilor of this district are hereby instructed by the Miami County Medical Society to vote against any proposal of the State Society to stand neutral or favor any action by the State Society favorable to nurse anesthetists.

RESOLVED: That the secretary of the Miami County Medical Society be instructed to forward a copy of these resolutions to the president of the Ohio State Medical Association, the editor of *The Ohio State Medical Journal* and the editor of the Bulletin of the National Anesthesia Research Society, 16 East Broad Street, Columbus, Ohio, with the instructions to publish same in their next issue.

Montgomery County Medical Society devoted its meeting of February 4 to a review of current literature by Dr. A. W. McCally and presentation of case reports. The latter included two interesting juvenile heart cases and septic pneumonia in children reported by Dr. S. H. Ashmun. The society recently placed itself on record in the nurse anesthetist question by adopting the following resolution:

RESOLVED: That the Montgomery County Medical Society is opposed to the use of nurses in the State of Ohio as anesthetists.

RESOLVED: That suitable legislation be introduced in the present session of the legislature to repeal the present act authorizing nurses to act as anesthetists under the direction of the surgeon.

RESOLVED: That the delegates of this society

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and the councilor of this district are hereby instructed by the Montgomery County Medical Society to vote against any proposal of the State Society to stand neutral or favor any action by the State Society favorable to nurse anesthetists.

THIRD DISTRICT

Logan County Medical Society met February 4, in Bellefontaine with 22 members present. After a good luncheon, Dr. Hamer reported removal by supravaginal hysterectomy of a fibrocystic tumor weighing 172 pounds, from a woman weighing about 100 pounds, exclusive of the tumor. Dr. Harbert then reported a case of bilateral glioma of retina in an infant 22 months of age, a double enucleation being done. Dr. D. P. Young was elected to membership, and a letter of transfer for Dr. W. T. Sullivan to the Sandusky Society was issued.—M. L. Pratt, Secretary.

Marion County Medical Society held its regular monthly meeting on February 1, with 25 members in attendance. A resume of the year's progress in diagnosis and treatment of several diseases was presented in excellent shape by Dr. F. Young, and thoroughly discussed by Drs. C. W. Sawyer, Mouser, Willey, Weeks, Newhouse, Mahla, Dodd and Murphy. Following the meeting an oyster supper was served.—J. A. Dodd, Secretary.

Defiance County Medical Society held its regular monthly meeting at the residence of the president, Dr. W. S. Powell, February 4. A splendid paper on "Some Syndromes of the Central Nervous System" was read by Dr. G. W. Huffman, who also reported cases of puerperal eclampsia, spinal meningitis and facial paralysis. The subjects were earnestly discussed by every member present. Light refreshments were served, after which the question of medical inspection of school children was considered and a committee appointed to confer with the health officer and a committee from the board of education and report to the society at an early called meeting.

FOURTH DISTRICT

Paulding County Medical Society announces the election of the following officers for 1921: President, Ray Mouser, Latty; vice-president, G. E. Moats, Antwerp; secretary-treasurer, R. J. Dillery, Paulding; delegate, C. E. Huston, Paulding; alternate, L. R. Fast, Paulding; censors, A. H. Mouser, J. W. Cartwright, L. R. Fast; legislative committee, R. J. Dillery, chairman; F. F. DeMuth, Ernest Kohn; correspondent, R. J. Dillery.

The society recently adopted resolutions on anesthesia similar to those published in the report of Miami County Society on page 192.

Sandusky County Medical Society held its first regular meeting of the year at the home of Dr. F. L. Moore, Fremont, January 29. There was a 50 per cent. attendance despite the fact that unavoidable circumstances prevented at least eight of the regular standbys from being present. The spirit

of the meeting was animated throughout. After an excellent report on the legislative situation by Dr. E. M. Ickes, our auxiliary committeeman, in which he presented exhibits of the machinations of a local chiropractor, Dr. Ickes and the secretary were instructed to confer with the Sandusky County legislators as well as communicate with them by letter.

Dr. E. H. Porter, Tiffin, read an excellent paper on "Headaches of Nasal and Ocular Origin." He urged more systematic examination of the sinuses in all cases of obscure morning headaches, and also warned against the abuses to which people are susceptible at the hands of "eye-fitters," citing some striking cases.

Dr. Porter's paper was a masterly presentation of the subject and brought forth much applause. He was extended a vote of thanks and elected to honorary membership in the society.

The secretary then spoke on "The Fundamentals of Successful Organization." Discussion of this paper was opened by Drs. Sackett and W. R. Deemer and a lively discussion followed which waxed humorous at times as "oversights" in diagnoses were recalled by some of the older men. Sandusky County lacks only two members of attaining its cherished goal of enrolling every eligible physician in the county on its roster.—C. I. Kuntz, Secretary.

FIFTH DISTRICT

Ashtabula County Medical Society's 141st regular meeting, held in Ashtabula January 10, was one of the most successful it has had from the essential standpoints of interest and attendance. Drs. G. T. Wasson, county health commissioner, and A. J. Pardee, Ashtabula city health commissioner, discussed "Contagious and Quarantinable Diseases and State Regulations" in a manner that was very helpful to those present. At the annual meeting in December the society elected Dr. R. B. Wynkoop, president; S. M. Lynn, vice-president; J. J. Hogan, secretary, and A. W. Hopkins, treasurer.—J. J. Hogan, Secretary.

Lake County Medical Society enjoyed an address on "Luke, the Beloved Physician," by Rev. W. A. Warren, pastor of the First Congregational Church, at its February 7 meeting. The scientific program included papers on "Endemic Goiter" by Dr. Harry G. Sloan of Cleveland, and "Gastric Ulcer" by Dr. A. P. Brady.—E. S. Jones, Secretary.

Lorain County Medical Society had a very profitable and enthusiastic meeting in Elyria, February 8, attended by about 40 physicians, including Dr. R. K. Updegraff, councilor of the Fifth District, and a number of other Clevelanders. The meeting was opened with the regular business routine, followed by presentation of clinical cases and reports of cases. The special feature of the program consisted of the showing of two three-reel films on "The Treatment of Gonorrhea and Syphilis", furnished by the State Department of Health. The society was very

fortunate in having Dr. J. A. Frank and R. G. Leland, of the bureau of venereal disease control of the State Department, present to answer questions and open the discussion following presentation of the films. Their talks were brimful of enthusiasm and practicability and proved very helpful to the physicians. An unfortunate incident, which turned out to be amusing, occurred when something went wrong with the operation of the picture machine. Dr. Updegraff was called on to address the society in the interim, and despite the racket of the machine gave a masterpiece of eloquence and humor. It was the unanimous sentiment of the members that this meeting was one of the best the society has ever had and guests also expressed themselves as well pleased. The society very much appreciated the courtesy of the State Department of Health in cooperating to make the program a success.—W. E. Hart, Secretary.

SIXTH DISTRICT

Summit County Medical Society's meeting of February 1 was attended by eighty physicians and nurses from Akron and Cuyahoga Falls. A record was established by the presentation of 43 applications for membership from physicians representing Kenmore, Cuyahoga Falls, Springfield Lake and Akron. Resolutions of regret at the loss sustained by the recent deaths of George Leander Starr of Hudson, Gustave Adolph Theiss of Akron and Hugh McCallum of London, Ontario, were passed by a silent standing vote. A committee of past presidents including Weller, Jacobs, Chase, Denison and Stevenson, recommended some changes in the constitution. The scientific program comprised a paper on "The Neglected Factor in the Medical Problem—The Patient" by E. B. Dyson, with discussion by C. E. Held, R. H. McKay, W. Wilson, J. C. Hassall, S. St. J. Wright and A. G. Gould; and an illustrated lecture on "Some Principles of Organic Evolution in Relation to Human Heredity" by Professor A. B. Plowman, of the biological department of the University of Akron. Professor Plowman's lecture was highly appreciated.—A. S. McCormick, Secretary.

SEVENTH DISTRICT

Tuscarawas County Medical Society held its February meeting in Dover on the 10th. "Life and Work of Louis Pasteur" and "Veratrim," were the titles of papers given by Dr. G. F. Zininger of Canton and S. M. France, respectively. Discussions were opened by Dr. E. D. Moore.—P. J. Alspaugh, Secretary.

EIGHTH DISTRICT

Athens County Medical Society met for its monthly session in the office of Dr. T. A. Copeland, the secretary, on February 1. A program of case reports was exceedingly interesting and many suggestions were developed. Dr. Wiley Sprague reported a case of tuberculosis, which by reason of incorrect diagnosis, has made mark-



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DETROIT

ed progress, emphasizing the importance of early recognition to the end that proper measures might be used to control the disease. In a legislative report Dr. Charles S. McDougall dwelled upon the necessity for alert action on the part of every member of the Association in combating the attempts of cults and others to secure legislation unfavorable to the interests of public health and scientific medicine. Dr. H. M. Taylor reported a case of the passage of a section of rib, one and a half inches long and very sharp on each end, swallowed by a patient. The patient did not remember having swallowed it and it passed through the entire alimentary canal without causing any disturbance until it lodged crosswise in the rectum. Removed and exhibited at the meeting.

Muskingum County Medical Society, meeting in regular monthly session in Zanesville, February 2, heard excellent papers on "Migraine" and "Some Observations on Empyema", the former by Dr. O. I. Dusthimer and the latter by Dr. E. M. Brown.—M. A. Loebell, Secretary.

NINTH DISTRICT

Lawrence County Medical Society in session recently adopted resolutions on the nurse anesthetist question similar to those published in the report of the Miami County Medical Society on page 192.—E. E. Ellsworth, Secretary.

Scioto County. Hempstead Academy of Medicine started the year auspiciously with a well attended meeting in Portsmouth on January 10. Dr. S. S. Halderman opened the scientific program with a paper and reports of cases on "Coxae Juvenilis—Osteochondritis", which was well received and brought the author numerous compliments on the excellent results outlined in his series of cases. Programs for the coming year have been formulated, printed in attractive folders and placed in the hands of each member and the secretaries of other societies in the Ninth District. "Facial Reconstruction" by Dr. George C. Schaeffer, president of the Columbus Academy, was the title of an address given at a meeting on February 14, when dentists of the city were guests.—Harry F. Rapp, Secretary.

DEATHS IN OHIO

Archie Clarence Brindle, M. D., Jefferson Medical College of Philadelphia, 1897; aged 50; member of Ohio State Medical Association; died at his home in West Liberty, January 9, of pneumonia, after an illness of only a few days. Dr. Brindle had practiced in West Liberty since his graduation from medical college. He is survived by his widow, five brothers and one sister.

Henry Frank Burman, M. D., Toledo Medical College, Toledo, 1911; aged 43; former member of the Ohio Medical Association; died at the home of his sister in Toledo, January 27. Dr. Burman had been ill for three months with pernicious anemia. He served as a lieutenant in the Medical Corps of the Army during the recent war. One son survives.

James Merton Day, M. D., Starling Medical College, Columbus, 1902; aged 46; member of the Michigan State Medical Society and Fellow of the American Medical Association; formerly a member of the Ohio State Medical Association; died suddenly in his office in Lansing, Michigan, January 21, from heart disease. Dr. Day was well-known in Ohio, having practiced in Waynesfield, Auglaize County, for sixteen years prior to his army service in the World War, at the conclusion of which he removed to Lansing. He leaves his wife and two daughters. Burial was made in Malta, Ohio.

Benjamin Franklin Holmes, M. D., Starling Medical College, Columbus, 1865; aged 78; died at his home in Hillsboro, January 21, of pneumonia. Dr. Holmes was a native of Highland county. He located for practice in Hillsboro soon after the close of the Civil War, and was the oldest practicing physician in the county at the time of his death. He was the son of the late Dr. Enos Holmes, with whom he was associated in practice for many years, and is survived by one daughter and two sons, Dr. Thomas Holmes,

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a physician of Bremerton, Washington, and Dr. Audry J. Holmes, a dentist of Westminster, British Columbia.

Leroy D. Munson, M. D., Columbus Medical College, 1881; died January 17, after an illness of several months with paralysis. Dr. Munson's home was in Cleveland. He was a son of the late Dr. Augustus Munson, a practitioner of Kenton and Hardin County for many years. He is survived by two sons.

Winfield Scott Ritenour, M. D., Ohio State University College of Medicine, Columbus, 1911; aged 40; former member of the Ohio State Medical Association; died February 2, from acid poisoning. Dr. Ritenour had practiced in Dayton for a year prior to his death, but was formerly a resident of Xenia. He was a member of the United States Public Health Service during the World War, holding the position of first assistant surgeon at Camp McClelland, Alabama. He leaves a widow and one son.

John DeLoss Rouse, M. D., Medical College of Ohio, Cincinnati, 1875; aged 58; former member of the Ohio State Medical Association; died at his home in St. Louisville, January 12, from cerebral hemorrhage. Dr. Rouse located in St. Louisville three years after completion of his medical education and continued practice there to the time of his death. Surviving are his wife, one son and one daughter.

William J. Sloan, M. D., Pulte Medical College, Cincinnati, 1886; aged 81; died at his home in East Liverpool, January 27, from complications. Dr. Sloan practiced medicine in East Liverpool for more than twenty-five years. When the Civil War started Dr. Sloan enlisted on the first call for volunteers and served throughout the war. For four years he was a lieutenant in Company C, Independent Pennsylvania Light Artillery. Four children survive, three of whom are Drs. J. H. Sloan, J. A. Sloan and E. Sloan of East Liverpool.

George V. Ess, M. D., Starling Medical College, Columbus, 1892; aged 66; died at his home in Massillon, February 7, from cancer. Dr. Ess was one of the oldest physicians in Massillon. His widow survives.

DEATH OF DR. MCCALLUM

Ohio friends of Dr. Hugh McCallum, M. D., M. R. C. P., L.L. D., of London, Ontario, learn of his death on January 25 with deep regret. Dr. McCallum served as president of the Canadian Medical Association in 1914, and was professor of medicine and dean of the Faculty of Medicine of Western University. Dr. McCallum was well known in Ohio and on two occasions appeared on the program of the Summit County Medical Society, which in 1914 made him an honorary life member of the local organization.

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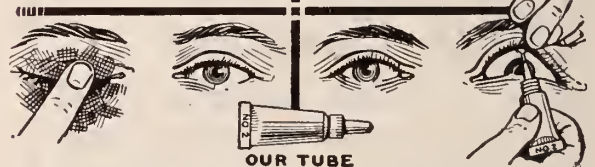
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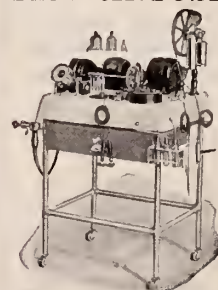
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The busy practitioner is, as a rule, so engrossed in general work that it has been impossible for him to keep as well informed as he could desire on the more intricate details required for an early diagnosis of pulmonary tuberculosis. Early diagnosis is universally acknowledged to be an absolute necessity in order to produce the best results in treatment. It not only assures more beneficial results for the individual patient but also represents the removal of the source of infection to his associates.

Believing that these paramount principles can be greatly improved upon, the State Sanatorium at Mt. Vernon has initiated a School of Tuberculosis, through which the facilities for clinical and diagnostic instruction at the sana-

torium are made available to the physicians of Ohio. The school will be operated throughout the year. Courses are ten days in length and open to all physicians in the state without cost, upon application to Dr. F. C. Anderson, superintendent of the sanatorium.

A waiting list of applicants for these courses is now under Dr. Anderson's supervision. Two students only will be accepted for each period of study, covering ten days, seventy hours. Desired dates may be reserved if possible.

Dr. Anderson announces that particular emphasis will be given to clinical study. The course offers routine training in diagnosis with special stress on the signs and symptoms of early disease, with attention to the technique of the detection of these signs. The diagnostic standards of the National Tuberculosis Association will be considered and taught in a thorough manner. Special attention will be accorded active rales; latent rales and methods of eliciting them; classification of cases; percussion and auscultation technique; mistakes in diagnosis; bronchiectasis and prognosis.

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conjunction with the findings upon physical examination are a valuable adjunct in diagnosis and for radiographic study. Consideration will be given to theory and technique of X-ray; classification of cases by X-ray diagnosis by fluoroscopy and radiography, and X-ray in artificial pneumothorax treatment.

The laboratory curriculum will include bacteriology; routine staining of bacilli; tuberculin tests; technique of artificial pneumothorax, and animal inoculation.

The subject of treatment will cover general considerations; sanatorium treatment; daily rounds with physicians; diet and drugs; rest; hemorrhage; tuberculin and its contra-indications; artificial pneumothorax, pregnancy, and climatology.

There is a general awakening to the need of better training in the fight against tuberculosis. The courses offered by the United States Public Health Service at its various district headquarters exclusively to ex-service physicians have demonstrated their value and popularity by the numerous requests that have been made to open the courses to all physicians without restriction. The course offered by the State Sanatorium will meet this need and physicians entering will be benefitted by their direct contact with the practical sanatorium routine and the varied clinical material available. In addition, the opportunity to review the intricate and finely balanced details of chest examination is highly valuable to every physician and is sure to bear fruit in more accurate physical examinations subsequent to attendance during the session of one of these courses.

The sanatorium, in turn expects to benefit by association with the physicians from general practice by learning of the obstacles continually confronting them in their diagnosis and treatment of tuberculosis outside of the sanatorium. It is hoped also to blaze a trail in this work whereby other sanatoria similarly situated may perhaps follow, to fill the nation-wide need for better trained chest diagnosticians in general practice.

Another important step in the fight against tuberculosis, in which the cooperation of the medical profession is earnestly sought by the State Tuberculosis Sanatorium, is the statewide program of clinics which it instituted late in February jointly with the State Department of Health and the Ohio Public Health Association.

Under this program, expert diagnostic service will be taken into more than thirty counties, to aid local physicians in diagnosing suspected or incipient cases. Before each clinic opens the physicians of the county in question will be approached by a nurse detailed by the State Department of Health to conduct the preliminary examination, and will be asked to refer to the clinic such of their patients as they believe would be benefitted by the thorough physical examina-

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BATTLE CREEK SANITARIUM

tion offered. School authorities, industrial leaders and religious, civic and social agencies will be asked to give similar information.

Dr. F. C. Anderson, of the State Sanatorium, is chief diagnostician, giving his personal attention to the diagnostic work in every county visited. Nursing service is detailed from the State Health Department and each local health commissioner will be director of the clinic in his district.

Hamilton County was the first on the clinic schedule for the state. Its clinics were held at several points within the county during the week of February 21. Work in Portage County was scheduled for the following week. Other counties and cities to follow on the schedule, in approximately the order stated are: Dayton, Logan County and Bellefontaine, Allen County, Defiance County, Findlay, Erie County, Tiffin, Marion, Delaware County and Delaware.

These clinics are expected to have been completed by the early part of April, after which the following counties and cities will be taken up:

Counties—Sandusky, Marion, Huron, Adams, Ashland, Mercer, Jefferson, Belmont, Erie, Lorrain, Shelby, Henry, Clinton, Miami, Clermont, Highland, Guernsey, Pickaway, Lake, Ashtabula.

Cities—Painesville, Bellaire, Martins Ferry, Defiance, Middletown, Tiffin, Cambridge.

As previously announced in *The Journal*, the

principal purposes of the clinics are:

1. To assist local physicians in the diagnosis of early or suspected cases.
2. To create in the infected individual and his family the proper attitude toward tuberculosis.
3. To effect through the agencies of the medical profession and the tuberculosis hospital a more efficient curative service.
4. To carry to the general public the necessary information regarding the prevention and cure of tuberculosis.

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Psychologist, paying \$1,600 a year, with quarters, subsistence and laundry, or \$2,200 a year without. Form 1312. Receipt of applications to close March 15.

Associate in clinical psychiatry and psychotherapy (\$2,500 a year and maintenance). Form 2118. Receipt of applications to close March 29.

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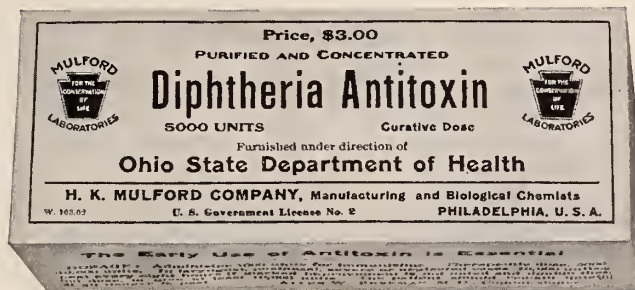
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If your druggist does not have it in stock, tell him to get it for you. There are no exclusive distributing depots, any druggist can get it.

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OHIO HOSPITAL NOTES

An appropriation of \$151,250 for the purchase of land and the remodeling and erection of buildings at the Massillon State Hospital has been recommended to the legislature by the State Board of Administration. At present the hospital tract covers 850 acres, and an addition of 420 acres is sought.

—During the year 1920, a total of 8,004 patients, classed as 1,625 charity, 4,506 private service, and 1,873 outpatients, were cared for at Miami Valley Hospital, Dayton. The report shows 762 babies were born at the hospital, about 25 per cent. of the total for the city. There were 3,352 operations; 72,995 days of nursing; and total expenditures amounted to \$265,045.72, being a cost per day, per patient of \$3.64.

—Portsmouth City Council, in session in January, smothered an ordinance providing \$100,000 bonds to be used in the erection of additions to and purchase of equipment for Hempstead Hospital. Supporters of the ordinance, including the hospital committee of the Chamber of Commerce, made an earnest plea for its passage but it was voted down because of the city's straightened financial condition.

—Officers of the newly elected staff of Providence's Hospital, Sandusky, are Dr. H. D. Peterson, president; Dr. J. D. Parker, vice-president, and Dr. Henry Graefe, secretary-treasurer.

—Superintendent P. W. Behrens of Toledo Hospital reports that last year his institution turned away 728 patients due to the shortage of rooms. During the same time the hospital cared for 623 more patients than were attended in 1919.

—Late in January Governor Davis requested the attorney general to withhold approval of abstracts for 1,533 acres of land in Crawford County, contracted for by the State Board of Administration at a cost of \$429,240, as a site for a new hospital for feeble-minded. A bill pending in the legislature provides for the repeal of the \$650,000 appropriation previously authorized for the purchase of a site for the new hospital, and stipulates its location on the 1,585 acre state farm at Orient.

In an address before the Cincinnati Public Health Federation and the United Jewish Charities, at the Cincinnati General Hospital recently, Dr. E. J. Emerick, superintendent of the State Hospital for Feeble-Minded declared there are more than 20,000 feeble-minded persons in Ohio, only 4,000 of whom are in institutions. For the welfare of the public as well as the individuals themselves, he said at least half of the remaining 16,000 should be cared for by the state.

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"Choosing a Family Physician"

(Continued from page 156)

that your doctor should, by careful questioning and physical examination, try to determine what your ailment is. Only when he has done that can he intelligently write a prescription for you, but far more important than the medicine, will be his instructions as to how you shall live, what kind of work you can do, how you shall eat, how you shall sleep, what you shall drink.

"Beware of the man who asks few questions, who does not examine you, who says little and just looks wise. A visit to his office is not worth fifty cents. You can afford to pay \$2.00 or more per visit for a man who really gives you service.

"Every once in a while one of the men in the plant will go to his physician with some minor complaint. Without taking the trouble to find out the real condition, he will tell this man, for instance, that night work does not agree with him, that he ought to change his job, or that the work is too hard, advising him to shift over to the day job or leave the job entirely. Now the physician does not stop to realize that he may be separating the man from a good job where he could earn more money than in any other place and that he ought to be dead certain of the facts before giving such advice. What that physician should do if he suspects that the man's job is unfavorably affecting his health, is to visit the plant, or at least call up the physicians of the plant and see whether there are any conditions surrounding that job which are unfavorable to health. Rarely, if ever, does the physician call up the plant to see whether his patient could be shifted to another job.

"As an example of what has been said above, we refer to the diagnosis on a Mutual Aid report from a physician which read as follows: 'Indigestion, nervousness, and overwork.' The next week's report read, 'Neuresthenia, due to night work.' In the usual way this case was checked up carefully by the medical department of the plant. Our records showed that the man had gained five and one-half pounds since he had gone on that job one year ago and that his efficiency and earning had increased in the past three months.

"Now this man had gone to his doctor complaining of headaches, pain in his stomach, and weakness in his legs. Whether his physician carefully examined him or not is not known, but when he was carefully examined here it was found that the pain was not located in his stomach. The only abnormal thing that could be found was a marked pain and tenderness over the region of the appendix, indicating that he had chronic appendicitis. This was confirmed by sending the man to a specialist, who recommended operation. It is plain to everyone that a day job would not relieve this man of the infection in his appendix. The patient in this way found out that there was a serious situation. He took the subject up with

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his family physician who agreed with the diagnosis and advised operation. The operation was successfully done, and demonstrated that our physical examination and diagnosis were correct.

"Finally, a good family physician is one who has your interests always at heart, who does not pretend to know it all; who will advise you now and then in a continued illness that he wants consultation or another physician's opinion on your case, or equally important, does not resent it when you suggest that he call in some other physician in consultation. Always remember that the only way to shorten your disease is to be dead certain of the diagnosis. In this connection, the men who work in this plant are in position to suggest to their physicians that they secure from our medical department all of the accumulated informations, and so on, that are here recorded. In many instances this information, which we will be glad to furnish on order of our employes, can be a source of great help to the family physician. The records of the collection of minor symptoms of which you have complained in the medical department may be the very facts that will help him make a diagnosis at the time you are severely ill.

"The way to keep well is to have your family physician give the members of your family a 'once-over' at least every year. By this we mean that it pays not to wait for illness, but to have the family physician check up the physical condition of your family so he may advise them how to keep well."

State Medical Board Notes

William W. Wood was fined \$25.00 and costs in the Municipal Court of Akron on February 9, for practicing medicine without a license.

Mrs. Anna Majchrowski, (unlicensed midwife), has been arrested for practicing medicine without a license. The case will be heard in Municipal Court on February 17.

J. J. Pappen, (unlicensed), of Cleveland was convicted of practicing medicine without a license on two counts on January 21, and fined \$500 and costs in each case. The fines were later suspended because the man has a family of five children.

Correction

In the list of physicians who received reciprocity licenses to practice in Ohio at the January 4 meeting of the State Medical Board, published in the February *Journal*, the year of Dr. Russel Montague Young's graduation from Rush Medical College was given as 1920, whereas it should have been 1900. Dr. Young is located in Lima.



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Montgomery.....	A. F. Shepherd, Dayton.....	R. C. Austin, Dayton.....
Preble.....	W. H. Tucker, Eldorado.....	S. P. Carter, W. Manchester.....
Shelby.....	A. W. Hobby, Sidney.....	V. W. LeMaster, Sidney.....
		2d Thursday, monthly 2d and 4th Monday each month 2d Thursday each month 1st Thursday each month except July and August 1st Thursday each month 1st and 3d Friday each month 3d Thursday, monthly 1st Thursday, monthly
Third District..		
Allen.....	C. H. Clark, Lima.....	J. R. Tillotson, Lima.....
Auglaize.....	W. S. Stuckey, Wapakoneta.....	C. L. Mueller, Wapakoneta.....
Hancock.....	W. J. Zopfi, Findlay.....	Nellie B. Kennedy, Findlay.....
Hardin.....	D. H. Bowman, Kenton.....	W. A. Belt, Kenton.....
Logan.....	F. B. Kaylor, Bellefontaine.....	M. L. Pratt, Bellefontaine.....
Marion.....	H. L. Uhler, Marion.....	J. A. Dodd, Marion.....
Mercer.....	J. P. Symons, Rockford.....	D. H. Richardson, Celina.....
Seneca.....	J. A. Gosling, Tiffin.....	E. H. Porter, Tiffin.....
Van Wert.....	C. G. Church, Van Wert.....	N. E. Leake, Van Wert.....
Wyandot.....	Frederick Kenan, U. Sandusky..	B. A. Moloney, U. Sandusky..
		1st and 3d Tuesdays 3d Thursday, monthly 1st Wednesday, monthly 1st Thursday, monthly 1st Friday, monthly 1st Tuesday, monthly 2d Tuesday, monthly 3d Thursday, monthly 2d and 4th Monday, monthly 1st Thursday, monthly
Fourth District. (With Third District in Northwestern Ohio District) Tiffin, Oct. 26-27		
Defiance.....	W. S. Powell, Defiance.....	D. J. Slosser, Defiance.....
Fulton.....	W. L. Lathrop, Metamora.....	R. W. Reynolds, Fayette.....
Henry.....	Charles Mowry, Napoleon.....	C. H. Skeen, Napoleon.....
Lucas.....	E. W. Doherty, Toledo.....	J. F. Wright, Toledo.....
Ottawa.....	A. A. Brindley, Pt. Clinton.....	S. T. Dromgold, Elmore.....
Paulding.....	Ray Mouser, Latty.....	R. J. Dillery, Paulding.....
Putnam.....	P. D. Bixel, Pandora.....	H. A. Neiswander, Pandora.....
Sandusky.....	E. W. Baker, Clyde.....	C. I. Kuntz, Fremont.....
Williams.....	W. L. Hogue, Montpelier.....	J. A. Weitz, Montpelier.....
Wood.....	J. W. Rae, Bowling Green.....	F. V. Boyle, Bowling Green.....
		2d Wednesday, bi-monthly Semi-monthly 3d Wednesday, monthly Friday, each week 2d Thursday, monthly 3d Wednesday, monthly 1st Thursday, monthly last Thursday, monthly 2d Thursday, each month 2d Thursday, monthly
Fifth District.... (No District Society)		
Ashtabula.....	R. B. Wynkoop, Ashtabula.....	J. J. Hogan, Ashtabula.....
Cuyahoga.....	W. B. Chamberlin, Cleveland.....	Lester Taylor, Cleveland.....
Erie.....	F. F. Lehman, Sandusky.....	H. N. Sarchett, Sandusky.....
Gauga.....	J. A. Heeley, Parkman.....	Isa Teed-Cramton, Burton.....
Huron.....	R. L. Morse, Norwalk.....	W. W. Lawrence, Norwalk.....
Lake.....	V. H. Tuttle, Madison.....	E. S. Jones, Painesville.....
		2nd Tuesday, monthly Every Friday evening Last Thursday, monthly 2d Thursday, Jan., March, July and Sept. 2d Thursday, monthly 1st Monday, monthly

Societies

President

Secretary

Lorain.....	J. R. Pipes, Avon Village.....	W. E. Hart, Elyria.....	2d Tuesday, monthly
Medina.....	M. F. Miller, Wadsworth.....	H. P. H. Robinson, Medina.....	3d Wednesday
Trumbull.....	Walter W. McKay, Warren.....	John D. Knox, Warren.....	3d Thursday monthly except June, July and August

Sixth District...

Ashland.....	C. C. Patton, Ashland.....	D. H. Mohn, Ashland.....	1st Tuesday, Jan., March, May, July, Sept., Nov.
Holmes.....	J. C. Elder, Nashville.....	A. T. Cole, Millersburg.....	1st Tuesday, monthly
Mahoning.....	W. E. Ranz, Youngstown.....	H. E. Patrick, Youngstown.....	3d Tuesday, monthly
Portage.....	S. U. Sivon, Ravenna.....	E. H. Knowlton, Mantua.....	2d Thursday, monthly
Richland.....	G. C. Smith, Mansfield.....	Chas. R. Keller, Mansfield.....	3d Thursday, monthly
Stark.....	Perry King, Alliance.....	George S. Hackett, Canton.....	3rd Tuesday, Jan., March, May, July, Sept., Nov.
Summit.....	R. V. Luce, Akron.....	A. S. McCormick, Akron.....	1st Tuesday, monthly
Wayne.....	O. P. Ulrich, Orrville.....	Fred Snyder, Orrville.....	2d Tuesday, Jan., April, July, Oct.

Seventh District

Belmont.....	R. H. Wilson, Martins Ferry.....	J. S. McClellan, Bellaire.....	2d Wednesday, monthly, at 1:45 p. m.
Carroll.....			
Columbiana.....	P. C. Hartford, E. Palestine.....	C. R. Larkin, East Liverpool.....	2d Tuesday, monthly, alter- nately, in Lisbon, Salem and E. Liverpool
Coshocton.....	D. Edmund Cone, Coshocton.....	J. D. Lower, Coshocton.....	4th Thursday, April, June, Sept., Dec.
Harrison.....	H. I. Heavilin, Cadiz.....	C. H. Skeen, Napoleon.....	1st Wednesday, monthly
Jefferson.....	V. B. Di Loreto, Steubenville.....	J. R. Mossgrove, Steubenville.....	2d Tuesday, monthly
Monroe.....		J. H. Pugh, Woodsfield.....	2d Wednesday, monthly
Tuscarawas.....	A. C. Dempster, Uhrichsville.....	P. J. Alsbaugh, N. Philadelphia.....	1st Tuesday, monthly

Eighth District.

Athens.....	W. S. Rhodes, Nelsonville.....	T. A. Copeland, Athens.....	1st Tuesday, monthly
Fairfield.....	Ralph Smith, Lancaster.....	R. W. Mondhank, Lancaster.....	2d and 4th Tuesday, monthly
Guernsey.....	Fred W. Lane, Cambridge.....	F. M. Mitchell, Cambridge.....	1st and 3d Tuesday each month
Licking.....	Carl Evans, Newark.....	W. E. Shrontz, Newark.....	Last Thursday, monthly
Morgan.....	C. V. Davis, Pennsville.....	D. G. Ralston, McConnelsville.....	1st Wednesday, monthly
Muskingum.....	C. U. Hanna, Zanesville.....	Maurice Loebell, Zanesville.....	1st Wednesday, monthly
Noble.....	G. H. Zimmerman, Belle Valley.....	J. L. Gray, Caldwell.....	1st Thursday, monthly
Perry.....	J. C. Sommers, Somerset.....	C. B. McDougal, N. Lexington.....	3d Thursday, monthly
Washington.....	E. W. Hill, Jr., Marietta.....	A. G. Sturgiss, Marietta.....	2d Wednesday, monthly

Ninth District...

Gallia.....	C. G. Parker, Gallipolis.....	Milo Wilson, Gallipolis.....	1st Wednesday, monthly
Hocking.....	O. V. Donaldson, Gore.....	M. H. Cherrington, Logan.....	
Jackson.....	A. G. Ray, Jackson.....	R. W. Caldwell, Jackson.....	1st Tuesday, monthly
Lawrence.....	O. H. Henninger, Ironton.....	E. E. Ellsworth, Ironton.....	1st Thursday, monthly
Melgs.....	P. A. Jividen, Rutland.....	L. A. Thomas, Middleport.....	1st Wednesday, April, July and Oct.
Pike.....	F. C. Metzger, Waverly.....	L. E. Wills, Waverly.....	1st Monday, monthly
Scioto.....	Tunis Nunemaker, Portsmouth.....	Harry Rapp, Portsmouth.....	2d Monday, monthly
Vinton.....	O. S. Cox, McArthur.....	H. S. James, McArthur.....	4th Wednesday, monthly

Tenth District...

Crawford.....	R. J. Caton, Bucyrus.....	H. S. McClure, Bucyrus.....	2d Thursday, monthly
Delaware.....	I. T. McCarty, Delaware.....	Rees Philpott, Delaware.....	1st Friday, each month
Franklin.....	G. C. Schaeffer, Columbus.....	James A. Beer, Columbus.....	1st four Mondays
Knox.....	H. W. Blair, Mt. Vernon.....	C. D. Conard, Mt. Vernon.....	2d and 4th Wednesday, from March to middle of Dec.
Madison.....	L. E. Evans, West Jefferson.....	H. V. Christopher, London.....	4th Thursday
Morrow.....	R. L. Pierce, Mt. Gilead.....	Todd Caris, Mt. Gilead.....	1st Wednesday, monthly
Pickaway.....	J. B. May, New Holland.....	D. V. Courtright, Circleville.....	1st Friday, monthly
Ross.....	G. E. Robbins, Chillicothe.....	G. S. Mytinger, Chillicothe.....	1st Tuesday, monthly
Union.....	C. O. Thompson, Raymond.....	E. J. Marsh, Broadway.....	2d Tuesday

NEWS NOTES OF OHIO

Dayton—Dr. Franklin I. Shroyer of this city spent the month of February in post-graduate study at Johns Hopkins and is now in Miami, Florida.

Jefferson—Dr. Vincent L. Hodges of Indianapolis has opened offices here. Prior to 22 months' army service at Fort Riley during the recent war, Dr. Hodges practiced medicine at Shelbyville, Indiana, for 10 years.

Springfield—Dr. Read L. Bell, one of the oldest members of Clark County Medical Society and three times its president, was guest of honor at the annual banquet of the society in January. A silver loving cup typifying the esteem in which he is held, was presented to Dr. Bell.

Alliance—Dr. P. C. Ramsey is reported convalescent from paralysis with which he was stricken in January.

Columbus—Dr. H. H. Snively has been presented with a medal by the American Committee on Jewish Foreign Relief Work in recognition of his services with the Red Cross for the Jewish people in Warsaw.

Paulding—Dr. John U. Fauster, a practitioner of this city for ten years, has moved to Defiance.

Delaware—Dr. W. F. Crickard sustained painful bruises about the head when he fell from the steps of his home to the frozen ground with violent force, recently.

Cincinnati—Dr. R. J. Erickson has resigned as resident physician at the local tuberculosis sanatorium, to engage in private practice.

Columbus—Dr. Henry S. Houghton, graduate Ohio State University College of Medicine, 1901, has been named director of Pekin Union Medical College, China. Dr. Houghton has spent 15 years in China, serving as dean and professor of tropical medicine of Harvard Medical School of China, Shanghai, and more recently as a member of the medical board of the institution of which he is now director.

Conneaut—Dr. E. H. Hurley has moved from this city to Cleveland, where he has assumed a position as physician for the Nickel Plate Railroad.

Columbus—Dr. Frank McCafferty, a practitioner of this city, has become a member of the staff of Indiana State Sanitarium, Rockville, Indiana.

Circleville—Dr. Lloyd Jonnes, formerly of this place, but recently of Gnadenhuetten, has again taken up residence here and opened offices for practice.

Zanesville—Dr. Harry Rambo, son of Dr. C. M. Rambo, has located for practice in this city.

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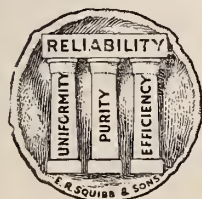
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The Suprarenalin (Epinephrin U. S. P.) preparations are now available.

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Suprarenalin Solution, 1:1000.....1 oz. bottles
Suprarenalin Ointment, 1:1000.....tubes

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McCONNELLSVILLE, OHIO

A private institution for the treatment of
Pulmonary and Laryngeal Tuberculosis

The sanatorium is located at McConnelsville, Ohio (a town of 3000) upon a beautiful high hill, with picturesque surroundings, and a pleasant environment. It is built on the cottage plan, (each patient having either an individual cottage or a cottage with a sleeping porch for two) and equipped for the scientific diagnosis and treatment of pulmonary and laryngeal tuberculosis.

The cottages have all modern conveniences, such as individual call bells, hot and cold running water in each cottage, electric lights, and a very adequate supply of furniture.

Climate means nothing in the treatment of pulmonary tuberculosis, so why send your patients west? The climate in Ohio is as good as any. The cardinal points of REST, FRESH AIR, PROPER FOOD, AND REGULATED EXERCISE is the method of treatment used.

CLOSE PERSONAL ATTENTION IS THE MOTTO OF THE INSTITUTION.

Success in the treatment depends upon the stage of the disease at which the patient is admitted to the institution. The sanatorium acts as a "school" where patients are taught to live properly and to protect others. They also learn the value of rest. By giving your patient a short period of "schooling" he will be better prepared to follow instructions and will have increased his chances of arrestment of his disease.

When in doubt as to diagnosis, we will admit the case for observation and report.

COMPLETE X-RAY DEPARTMENT AND LABORATORY.

ARTIFICIAL PNEUMOTHORAX TREATMENT AND TUBERCULIN WHEN INDICATED.

RATES, \$28.00 per week, which includes everything except an X-ray examination, which is made on admission.

Descriptive circular and other information on request.

Inquire of

DR. LOUIS MARK, Medical Director, Rocky Glen Sanatorium, McConnelsville, Ohio

Program of the

Seventy-Fifth Annual Meeting

of the

Ohio State Medical Association

Columbus, May 3, 4 and 5, 1921



GENERAL SESSIONS

OPENING SESSION

Tuesday, May 3, 10:00 A. M.

Meeting Place—G. A. R. Post Room No. 2, East End Main Floor, Memorial Hall.

1. Call to order by the President, Charles Lukens, M. D., Toledo.
2. Address of welcome on behalf of the City of Columbus.
3. Address of welcome on behalf of Columbus Academy of Medicine, by George C. Schaeffer, M. D., the President.
4. Annual address by the President of The Ohio State Medical Association.
5. Announcement of the general details of the program by Sylvester J. Goodman, M. D., the general chairman of the Committee on Arrangements.

SECOND SESSION

Wednesday, May 4, 3:30 P. M.

Meeting Place—Lodge Room, Third Floor, Elks' Home.

1. ORATIONS:

Surgery—

AN APPRECIATION OF REGIONAL ANESTHESIA IN MAJOR SURGERY—by Joseph Rilus Eastman, M. D., Professor of Surgery, Indiana University School of Medicine, Indianapolis.

Obstetrics—

OBSTETRICS AND GYNECOLOGY FROM THE STANDPOINT OF THE GENERAL PRACTITIONER—by Reuben Peterson, M. D., Professor of Obstetrics and Diseases of Women, University of Michigan Medical School, Ann Arbor.

HOUSE OF DELEGATES

FIRST SESSION

Tuesday, May 3, 11:00 A. M.

Meeting Place—G. A. R. Post Room No. 1, West End Main Floor, Memorial Hall.

1. *Call to order by the President.*

2. *Roll Call.*

3. *Miscellaneous Business*

(a) Selection of a special committee to act on recommendations embodied in President's address.

(b) Consideration of minutes of previous meeting. Minutes were published in The Journal, July, 1920, page 527.

(c) Introduction of resolutions.

4. *Nomination and Election of Nominating Committee—*

(Nominations from the floor, with one representative on the committee to be elected from each district. This committee shall report to the Second Session the result of its deliberations in the form of a ticket containing the names of three members for the office of president-elect, and of one member for each of the other offices to be filled. This procedure is necessary under Chapter V, Section 1, of the By-Laws.)

5. *Report of Officers—*

(a) Treasurer's report.

(b) Reports of Councilors as to the condition of the societies in their respective districts.

6. *Reports of Standing Committees—*

(a) Public Policy and Legislation—J. H. J. Upham, M. D., Columbus, chairman.

(b) Publication—L. L. Bigelow, M. D., Columbus, chairman.

(c) Medical Defense—J. E. Tuckerman, M. D., Cleveland, chairman.

(d) Medical Economics—H. L. Sanford, M. D., Cleveland, chairman.

(e) Medical Education—Charles E. Briggs, M. D., Cleveland, chairman.

(f) Auditing and Appropriations—S. J. Goodman, M. D., Columbus, chairman.

(g) General Secretaries—Wells Teachnor, M. D., Columbus, chairman.

7. *Reports of Special Committees—*

(a) Health Education—E. Otis Smith, M. D., Cincinnati, chairman.

(b) Crippled Children—B. G. Chollett, M. D., Toledo, chairman.

(c) Hospital Standardization—Andrews Rogers, M. D., Columbus, chairman.

(d) Control of Cancer—Andre Crotti, M. D., Columbus, chairman.

SECOND SESSION

Wednesday, May 4, 1:30 P. M.

Meeting Place—G. A. R. Post Room No. 1, West End Main Floor, Memorial Hall.

1. *Report of Nominating Committee.*2. *Annual Election of Officers and Committees—*

(a) President-elect. (One year.)

(b) Chairman and two members of Committee on Public Policy and Legislation. (One year each.)

(c) Three members of Publication Committee. (One year each.)

(d) One member of Committee on Medical Defense. One year.)

The term of Walter H. Snyder, M. D., Toledo, who was elected in 1920 to fill the unexpired term of W. J. Stone, expires.

(e) Three members of Committee on Medical Economics.

3. *Election of Members of Council—*

Members of Council are elected for two-year terms, those representing even-numbered districts expiring in odd-numbered years. To be elected, therefore:

Councilor, Second District—Present incumbent, W. A. Ewing, M. D., Dayton.

Councilor, Fourth District—Present incumbent, John G. Keller, M. D., Toledo.

Councilor, Sixth District—Present incumbent, E. J. March, M. D., Canton.

Councilor, Eighth District—Present incumbent, A. B. Headley, M. D., Cambridge.

Councilor, Tenth District—Present incumbent, S. J. Goodman, M. D., Columbus.

4. *Election of Delegates and Alternates to the American Medical Association—*

(Six delegates and six alternates were elected in 1920 to serve terms of two years each. It is probable, however, that under the apportionment of delegates to be made on the basis of our membership enrollment on April 1, the Association will be entitled to additional delegates and it will be necessary to elect them at the 1921 meeting.)

5. *Selection of place for the Annual Meeting of 1922.*6. *Miscellaneous Business.*7. *Installation of Officers for 1921-1922.*8. *Final Adjournment—House of Delegates.*

ANNOUNCEMENT

Immediately following adjournment the Council meets for reorganization—the selection of a chairman (who, according to the Constitution, is President of the Association), and a secretary of Council.

SURGICAL SECTION

W. D. HAINES, M. D., Cincinnati.....Chairman
HOWARD STITT, M. D., Washington C. H.....Secretary

Meeting Place—G. A. R. Post Room No. 1, West End Main Floor, Memorial Hall.

FIRST SESSION

Tuesday, May 3, 2:00 P. M.

1. THE CARE OF PATIENTS AFTER ABDOMINAL OPERATIONS—by A. Henry Dunn, M. D., Chillicothe. Discussion opened by George W. Crile, M. D., Cleveland, and Robert Carothers, M. D., Cincinnati.

2. PERFORATING GASTRIC ULCER, *with case reports*—by Charles T. Souther, M. D., Cincinnati.

3. BONE GRAFTING AND ITS CLINICAL APPLICATION—by J. J. Kurlander, M. D., Cleveland. Discussion opened by A. H. Freiberg, M. D., Cincinnati, and A. M. Steinfeld, M. D., Columbus.

4. SLOW PERFORATION OF THE ABDOMINAL VISCERA—by S. D. Foster, M. D., Toledo.

5. PRE-OPERATIVE AND POST-OPERATIVE RADIUM THERAPY, *with report of cases, exhibition of patients and screenage methods*—by Ben R. Kirkendall, M. D., Columbus. Discussion opened by Charles S. Hamilton, M. D., Columbus.

6. THE USE OF RADIUM WITH SPECIAL REFERENCE TO UTERINE CONDITIONS—by L. G. Bowers, M. D., and E. R. Arn, M. D., Dayton.

SECOND SESSION

Wednesday, May 4, 9:00 A. M.

7. CHAIRMAN'S ADDRESS—DISEASES OF THE PANCREAS—by W. D. Haines, M. D., Cincinnati.

8. GASTRO-INTESTINAL DIAGNOSIS. THE ADVANTAGES OF PRESENT DAY METHODS AS SEEN BY THE SURGEON—by Francis G. Leonard, M. D., Cleveland. Discussion opened by Frank Corrigan, M. D., Cleveland, and Charles S. Hamilton, M. D., Columbus.

9. THE TREATMENT OF SIMPLE COMPOUND FRACTURES—by Walter G. Stern, M. D., Cleveland. Discussion opened by R. H. McKay, M. D., Akron, and Ralph Carothers, M. D., Cincinnati.

10. SCALP WOUNDS, COMPLICATIONS AND TREATMENT—by J. Edward Pirrung, M. D., Cincinnati. Discussion opened by H. T. Sutton, M. D., Zanesville, and J. S. Rardin, M. D., Portsmouth.

11. ULCER AND CANCER OF THE STOMACH AND DUODENUM—by George W. Crile, M. D., Cleveland.

12. THE RELATION OF ABDOMINAL TO UROLOGICAL SURGERY—by Frederick C. Herrick, M. D., Cleveland. Discussion opened by E. Otis Smith, M. D., Cincinnati, and M. E. Bland, M. D., Cleveland.

13. ACUTE INFECTIVE APPENDICITIS—by Carl D. Hoy, M. D., Columbus. Discussion opened by Willard D. Haines, M. D., Cincinnati, and Frank Warner, M. D., Columbus.

MEDICAL SECTION

L. A. LEVISON, M. D., Toledo.....Chairman
C. L. CUMMER, M. D., Cleveland.....Secretary

FIRST SESSION

Tuesday, May 3, 2:00 P. M.

Meeting Place—G. A. R. Post Room No. 2, East
End Main Floor, Memorial Hall.

1. THE SCHOOL CHILD, THE FUTURE CITIZEN—
by P. Bruce Brockway, M. D., Toledo. Dis-
cussion opened by Oliver Steiner, M. D.,
Lima.
2. SYPHILIS IN ITS RELATION TO MEDICAL AND
SURGICAL DIAGNOSIS—by John Dudley Dun-
ham, M. D., Columbus.
3. THE PRE-DIABETIC STAGE—by Henry J. John,
M. D., Cleveland. Discussion opened by
J. H. J. Upham, M. D., Columbus.
4. CORRELATION AND COOPERATION BETWEEN
LABORATORY AND CLINIC—by H. T. Karsner,
M. D., Cleveland. Discussion opened by C.
F. Hoover, M. D., Cleveland.
5. MOTION PICTURE DEMONSTRATION OF THE
CLOSED METHOD TREATMENT OF EMPYEMA—
by Arvine E. Mozingo, M. D., Indianapolis.

SECOND SESSION

Wednesday, May 4, 9:00 A. M.

6. CHYLOUS ASCITES *With a Report of Four
Cases*—by M. A. Blankenhorn, M. D., Cleve-
land. Discussion opened by R. G. Pearce,
M. D., Akron.
7. HEART SIZE IN RELATION TO CHEST SIZE—
by Alfred Friedlander, M. D., and Samuel
Brown, M. D., Cincinnati.
8. INTRAVENOUS ADMINISTRATION OF PROTEIN
IN THE TREATMENT OF ARTHRITIS—by C. W.
Waggoner, M. D., Toledo. Discussion
opened by H. G. Pamment, M. D., Toledo.
9. INTRA-SPINOUS TREATMENT OF NEURO-SYPH-
ILITIC PATIENTS—by Grant Marthens, M. D.,
Dayton. Discussion opened by Richard Dex-
ter, M. D., Cleveland.
10. CLINICAL FEATURES AND PATHOLOGY OF
AORTITIS—by Charles McGavran, M. D., and
Ernest Scott, M. D., Columbus. Discussion
opened by R. K. Updegraff, M. D., Cleveland.

(See Program of Joint Medical and Surgical Section.)

MEDICAL AND SURGICAL SECTIONS

Thursday, May 5, 9:00 A. M.

Meeting Place—G. A. R. Post Room No. 1, West
End Main Floor, Memorial Hall.

(This program has been prepared to in-
terest all members of the Association and for
that reason no other section meetings will be
held on Thursday morning.)

1. SYMPOSIUM ON FRACTURES:

(a) *Surgical*—by Robert Carothers,
M. D., Cincinnati.

(b) *Medical*—by J. E. Tuckerman, M.
D., Cleveland.

(c) *Legal*—by Leroy Eastman, LL.
D., Toledo, member of the firm of Smith,
Baker, Effler, Allen and Eastman, attor-
neys at law, general counsel for the State
Association in the defense of civil mal-
practice suits.

2. STATUS OF WORK IN BEHALF OF CRIPPLED
CHILDREN IN OHIO. Motion picture demon-
stration conducted under the auspices of
The Ohio State Medical Association's Crip-
pled Children Committee, consisting of B. G.
Chollett, M. D., Toledo, chairman; A. H.
Freiberg, M. D., Cincinnati; and A. M.
Steinfeld, M. D., Columbus.

OBSTETRICS AND PEDIATRICS

W. D. FULLERTON, M. D., Cleveland.....Chairman
W. R. BARNEY, M. D., Cleveland.....Secretary

Meeting Place—Banquet Hall, Second Floor,
Memorial Hall.

FIRST SESSION

Tuesday, May 3, 2:00 P. M.

1. CHAIRMAN'S ADDRESS—by W. D. Fullerton,
M. D., Cleveland.
2. OBSTETRICAL OBLIGATIONS—By Magnus A.
Tate, M. D., Cincinnati.
3. FURTHER STUDIES IN THE UNEXPLAINED
MORBIDITY OF THE PUERPERIUM. *Report of
A Case*—by Andrews Rogers, M. D., Colum-
bus.
4. THE PHYSICAL AND PSYCHICAL REACTION OF
THE CHILD TO HIS ENVIRONMENT—by Hubert
C. King, M. D., Lakewood.
5. INFLUENZA IN CHILDREN—by Fred L. Bates,
M. D., Lima.
6. VAGINAL CAESAREAN SECTION: ITS FIELD OF
USEFULNESS. *With Report of a Case*—by
Loyal Leavenworth, M. D., Canton.

SECOND SESSION

Wednesday, May 4, 9:00 A. M.

7. THE USE OF FORCEPS IN OBSTETRICS—by Arthur H. Bill, M. D., Cleveland.
8. SOME OF THE RELATIONS OF PEDIATRICS AND OBSTETRICS—by Roy E. Kreigbaum, M. D., Columbus.
9. A CONSIDERATION OF THE VARIOUS METHODS FOR SHORTENING LABOR—by A. J. Skeel, M. D., Cleveland.
10. THE FETAL HEART BEAT DURING LABOR—by John Gardiner, M. D., Toledo.
11. THE RELIEF OF PAIN IN LABOR—by William Gillespie, M. D., Cincinnati.

EYE, EAR, NOSE AND THROAT

DERRICK T. VAIL, M. D., Cincinnati.....Chairman
 W. W. ALDERDYCE, M. D., Toledo.....Secretary

Meeting Place—Central M. E. Church, Corner E. Broad and Fourth Sts. (Two blocks west of Memorial Hall.)

FIRST SESSION

Tuesday, May 3, 2:00 P. M.

1. DEATH FROM THE TONSIL OPERATION WITH A REFERENCE TO MOTORIZED ADMINISTRATION OF ETHER—by Ivor G. Clark, M. D., Columbus. Discussion opened by H. B. Harris, M. D., Dayton, and J. E. Brown, M. D., Columbus.
2. LATENT TONSILLAR AND PERITONSILLAR ABSCESS—by Evan G. Galbraith M. D., Toledo. Discussion opened by J. E. Brown, M. D., Columbus.
3. HYPERPLASTIC SPHENOIDITIS—by Charles H. Hay, M. D., Cleveland. Discussion opened by Myron Metzenbaum, M. D., Cleveland.
4. INFECTION OF THE LATERAL SINUS—by E. W. Garrett, M. D., Cleveland. Discussion opened by J. M. Ingersoll, M. D., Cleveland.
5. WHEN SHALL WE DO AN ETHMOID OPERATION—by William Mithoefer, M. D., Cincinnati. Discussion opened by Myron Metzenbaum, M. D., Cleveland, and Francis Alter, M. D., Toledo.

SECOND SESSION

Wednesday, May 4, 9:00 A. M.

6. ORATION ON OPHTHALMOLOGY—by Lieutenant-Colonel Henry Smith, C. I. E., I. M. S., Amritsar, Punjab, India.

7. SYMPOSIUM ON CATARACT:

(a) A BRIEF REVIEW OF PRESENT DAY CONCLUSIONS OF THE ETIOLOGY, CLINICAL DIAGNOSIS AND SURGICAL TREATMENT OF CATARACT—by Robert Sattler, M. D., Cincinnati.

(b) PRACTICAL POINTS EMPHASIZED IN COLONEL HENRY SMITH'S TECHNIC FOR INTRA-CAPSULAR CATARACT EXTRACTION OF VALUE IN ANY METHOD OF EXTRACTION OF SENILE CATARACT—by Clarence J. King, M. D., Cincinnati.

(c) COMMENTS ON AND COMPARISONS OF THE VARIOUS CATARACT OPERATIONS IN VOGUE—by Andrew J. Timberman, M. D., Columbus.

(d) TREATMENT AFTER CATARACT OPERATION—by John W. Millette, M. D., Dayton.

Discussion of cataract symposium opened by Charles F. Clark, M. D., Columbus, followed by Victor Ray, M. D., Cincinnati, and Horace Bonner, M. D., Dayton.

8. DACRYOCYSTITIS: ETIOLOGY, PATHOLOGY, TREATMENT MEDICINAL AND SURGICAL—to be read by title by Charles S. Means, M. D., Columbus.

CLINIC

Thursday, May 5, 9:00 A. M.

St. Francis Hospital
 Corner State and Sixth Streets

EYE CLINIC conducted by Lieutenant-Colonel Henry Smith of India. Admission by tickets, obtainable from Dr. A. J. Timberman, Citizens Trust Building, Columbus.

DERMATOLOGY, PROCTOLOGY AND GENITO-URINARY SURGERY

AUGUSTUS RAVOGLI, M. D., Cincinnati.....Chairman
HUGH BALDWIN, M. D., Columbus.....Secretary

Meeting Place—East Parlor, Second Floor, Elks' Home.

FIRST SESSION

Tuesday, May 3, 2:00 P. M.

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1. REMARKS ON THE PROGRESS IN THE TREATMENT OF SYPHILIS—by Augustus Ravogli, M. D., Cincinnati.
 2. FUNCTIONAL KIDNEY TESTS—by Charles M. Harpster, M. D., Toledo.
 3. IMPORTANT FACTORS TO CONSIDER IN A PATIENT ANTICIPATING PROSTATECTOMY—by C. A. Coleman, M. D., Dayton.
 4. INCIDENCE OF SYPHILIS AMONG 700 JUVENILE DELINQUENTS—by Gertrude H. Transeau, M. D., Columbus.

SECOND SESSION

Wednesday, May 4, 9:00 A. M.

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5. SKIN LESIONS ACCOMPANYING CERTAIN CONSTITUTIONAL DISEASES—by J. L. Murray, M. D., Toledo.
 6. RADIUM IN DERMATOLOGY—by C. J. Broeman, M. D., Cincinnati.
 7. SKIN CLINIC—conducted by Charles J. Shepard, M. D., Columbus, with discussion by members of the section.

HYGIENE AND SANITARY SCIENCE

GILBERT E. ROBBINS, M. D., Chillicothe.....Chairman
R. R. RICHISON, M. D., Springfield.....Secretary

Meeting Place—G. A. R. Post Room No. 3, Second Floor, Memorial Hall.

FIRST SESSION

Tuesday, May 3, 2:00 P. M.

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1. SELLING PUBLIC HEALTH IN A GENERAL HEALTH DISTRICT—by Arlington Ailes, M. D., Sidney.
 2. PUBLIC HEALTH WORK IN A RURAL COMMUNITY—by R. D. Worden, M. D., Ravenna.
 3. WORKING OF THE HUGHES-GRISWOLD HEALTH LAW IN LUCAS COUNTY—by Charles Koenig, M. D., Toledo.
 4. RURAL PUBLIC HEALTH NURSING—by Miss Celinda Dunbar, R. N., Chillicothe.
 5. STUDENT NURSE RECRUITING MOVEMENT—by Mrs. Norma Selbert, R. N., Columbus.

SECOND SESSION

Wednesday, May 4, 9:00 A. M.

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6. THE MEDICAL AND PUBLIC HEALTH PHASES OF THE SALEM TYPHOID EPIDEMIC—by R. M. Schwartz, M. D., Salem.
 7. SOME PROBLEMS OF THE RURAL HEALTH COMMISSIONER—by C. H. Skeen, M. D., Napoleon.
 8. THE RELATIONSHIP OF THE HEALTH DEPARTMENT TO THE MEDICAL PROFESSION—by Donald D. Shira, M. D., Akron.
 9. THE PREVENTION AND CONTROL OF DIPHTHERIA—by Robert Lockhart, M. D., Cleveland.
 10. PROFESSIONAL COOPERATION. HOW TO GET IT AND KEEP IT—by H. E. Welsh, M. D., Youngstown.

 NERVOUS AND MENTAL DISEASES

R. HARVEY COOK, M. D., Oxford.....Chairman
 CHARLES W. STONE, M. D., Cleveland.....Secretary

Meeting Place—West Parlor, Second Floor, Elks' Home.

 FIRST SESSION

Tuesday, May 3, 2:00 P. M.

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1. CHAIRMAN'S ADDRESS—by R. Harvey Cook, M. D., Oxford.
 2. SOME SUGGESTIONS ON THE RELATION OF CONGENITAL SYPHILIS TO JUVENILE DELINQUENCY—by Henry H. Goddard, Ph. D., Columbus.
 3. STERILIZATION OF THE MENTALLY UNFIT—by E. J. Emerick, M. D., Columbus.
 4. A STUDY OF THE SPINAL FLUIDS OF ALCOHOLICS—by Alan D. Finlayson, M. D., and Louis J. Karnosh, M. D., Cleveland.

 SECOND SESSION

Wednesday, May 4, 9:00 A. M.

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5. PSYCHOSES ACCOMPANYING WITHDRAWAL OF TEETH—by Carl W. Sawyer, M. D., Marion.
 6. TUBERCULOUS MENINGITIS—by C. E. Shinkle, M. D., Cincinnati.
 7. TUMORS OF THE CORPUS CALLOSUM—by E. M. Baehr, M. D., Cincinnati.
 8. COMPARATIVE VALUES OF COMPLEMENT FIXATION METHODS IN SYPHILIS—by Howard D. McIntyre, M. D., Cincinnati.

 SPECIAL CONVENTION FEATURES

Visitors at the seventy-fifth annual meeting will have a good time socially as well as a profitable one scientifically. Read and be convinced.

Smoker

The entertainment committee has decided that the doctors after a long and tense period of war and readjustment need a little levity. Therefore, instead of the general session that in the past two years has been devoted to health insurance, there will be a pleasant smoker with a lively program of entertainment on the first evening of the convention, May 3, at 8:00 p. m.

During the first half hour there will be entertainment by children from the State Institution for the Deaf and Dumb which every physician will be sure to appreciate. This will be followed by a program of high-class vaudeville, imported for the occasion, and a boxing match. Throughout the evening good smokes and eats will be distributed.

Banquet

The annual banquet will be held on Wednesday evening, May 4, at 6:30 p. m. in the ball room of Elks Club. The affair will be informal; ladies are invited; plates will be \$5.00 each. Retiring President Lukens will preside at the banquet, and his speech will be responded to by the incoming president, Dr. Wells Teachnor. The after-dinner speaker for this occasion will be Arthur Walwyn Evans, the distinguished Welsh orator.

Arthur Walwyn Evans is thirty-four years of age. He lived in England twenty-four years, and was educated in Wales, England and Scotland. On the completion of his studies at one of the largest Scotch Universities, he was sent as a special evangelist by the Church of Scotland to the Shetland Islands and for several years preached in all parts of Great Britain. He came to America about ten years ago, to succeed Dr. Edward A. Steiner, well known Lyceum star, friend of Tolstoi and author of "The Trail of the Immigrant," as pastor in one of the large Congregational churches. A scholar of rare attainments, a gifted orator who creates a profound impression wherever he appears, and a keen analyst of men and affairs—such is Arthur Walwyn Evans.

Luncheon Meeting

County auxiliary legislative committeemen will be the guests of the Committee on Public Policy and Legislation at a luncheon on Tuesday,

May 3, 12 M., at the Elks Club, adjoining Memorial Hall. Dr. J. H. J. Upham, chairman of the state committee, will preside and there will be informal talks on legislative matters. Admission by card.

On Wednesday, May 4, presidents and secretary-treasurers of the county societies will be the guests of the Association at a luncheon to be given in the Elks club, adjoining Memorial Hall, at 12 M. Formerly this affair included only the officers of 100 per cent. counties, but this year every president and secretary-treasurer in the state will be invited to be present and participate in a program of short, snappy talks on medical organization. Admission by card.

Complimenting Lieutenant-Colonel Henry Smith of India, orator for the Eye, Ear, Nose and Throat Section, a luncheon will be given by that section, Wednesday, May 4, at 12 M., in the ball room of the Hotel Deshler. Those desiring to attend should communicate with Dr. A. J. Timberman, Citizens Trust Building, Columbus, who is in charge of the arrangements.

Honoring local and visiting members of the Alpha Kappa Kappa fraternity, the Pi Chapter of Alpha Kappa Kappa will give a luncheon at the Chittenden Hotel, Wednesday, May 4, at 12 M. A nominal sum will be charged. Those wishing to attend should notify Byron G. Shaffer, care the Alpha Kappa Kappa, 327 W. Seventh Avenue, Columbus.

Luncheon for Medical Women

Under the auspices of the women physicians of Columbus a luncheon will be held for visiting women physicians, probably on the second day of the meeting, Wednesday, May 4. Dr. Grace Welsh is in charge of arrangements for this function and will announce the definite time, place and cost in the pamphlet program secured at the registration desk.

Entertainment for the Ladies

A pleasing program of entertainment for the visiting ladies is being worked out by the local committees and will be definitely announced in the pamphlet program. Tentatively this program includes a theater party, tea and other interesting features.

Golf Tournament

Physicians who enjoy golf will be interested in the announcement that The Ohio Medical Golfing Association will hold its first tournament on the course of the Scioto Country Club, Columbus, on Monday, May 2, the day preceding the opening of the annual meeting of the State Association.

The Ohio Medical Golfing Association is the outgrowth of a local organization formed by the

golfing physicians of Columbus and Franklin County in the summer of 1920. Several events held by this small group were so successful that it was decided to further develop the organization, and in October medical golfers from Dayton, Springfield, Chillicothe, Mt. Vernon, Newark and other nearby cities and towns united with those from Columbus to form The Ohio Medical Golfing Association.

The membership at present numbers about fifty, and it is expected that this number will be doubled. The by-laws provide that any member of the Ohio State Medical Association in good standing may become a member upon acceptance of its by-laws and payment of the enrollment fee. It stipulates that the annual tournament shall be held either just before or during, or just after the annual meeting of the State Medical Association, the time and place to be determined in advance, provided that the time shall not be in conflict with the scientific programs. An annual dinner and meeting will be held on the evening of the day of the tournament.

Drs. J. J. Coons, Earl Gaver, Charles Hoffhines, Halbert Blakey and C. W. McGavran are members of the local committee which is arranging the tournament for May 2. They urge all physicians in the state who are interested in golf to communicate at once with Dr. Coons, 370 E. Town Street, Columbus, in order that they may qualify as members and be prepared to play in the first tournament. A number of splendid prizes will be offered and a good time is assured.

Local Committees

S. J. Goodman, M. D., Columbus
General Chairman for the State Association.

Reception—Drs. G. C. Schaeffer, Chairman, J. F. Baldwin, Chas. F. Clark, R. B. Drury, Emilie Gorrell, C. S. Hamilton, W. J. Means, E. F. McCampbell, T. W. Rankin, E. J. Wilson, Howard Whitehead.

Badges—Drs. J. B. Alcorn, Chairman, Hugh Baldwin, Verne A. Dodd.

Projection Apparatus—Dr. Charles F. Bowen, Chairman.

Halls and Meeting Places—Drs. A. Timberman, Chairman (General and E. E. N. & T.), Ben Kirkendall (G. U.), W. D. Murphy (Medical), E. H. Ryan (Obstetrics and Pediatrics), E. M. Freese (Surgical), Earl Gaver (Nervous and Mental), E. R. Hayhurst (Hygiene and Sanitary Science).

Entertainment—Drs. C. W. McGavran, Chairman, Wells Teachnor, J. H. J. Upham, Andre Crotti, Joseph Price, P. D. Shriner, J. M. Thomas, Grace Welsh.

Exhibits—Dr. Fred Fletcher, Chairman, Don K. Martin. Scientific Exh.—Drs. H. J. Means, F. G. Boudreau.

Registration—Dr. H. M. Platter, Chairman.

EDITORIAL COMMENT

by D. K. M.

"Talking Sickness"

The peculiar form of encephalitis, which has been reported as "talking sickness," from which little eight-year old Miriam Rubin, Waukegan, Illinois, suffers, has been the subject of a widely circulated newspaper story. This story is based on half truths. In addition, the chiropractors have commercialized the story by a widespread advertising propaganda.

The Journal of the American Medical Association under date of March 5 contains a most illuminating article on page 654 including a case history from day to day of the treatment and condition of the Rubin child. An editorial in the same issue is of particular interest and will bear repetition here:

THE STATE FAILS

A child suddenly falls ill. The malady is strange; physicians who are called give the disease a name, and tell the parents that any relief which science affords is only palliative and not curative, and that body forces frequently overcome the disease. The condition is actually encephalitis, an inflammation of the brain. As with other diseases affecting the nervous system, there ensue excitation, delirium, fever and twitching of the arms and legs. The parents are anxious and wish to do everything that is humanly possible. It is not surprising, therefore, that they accept the services of a pretender to scientific knowledge. They know no anatomy or physiology; they cannot judge between the true and the false; they know only that their child is sick and that a man who is permitted by the state to practice the healing art is offering them aid. They accept. How many parents would not? The chiropractor administers his treatment. Gradual remission of the symptoms ultimately occurs. The parents are overjoyed. In the first flush of their happiness, they write glowing testimonials to the chiropractor's ability. A miracle has been worked! The sensational press is furnished with "live" material. Sunday "feature pages" carry columns of write-ups and pictures and incidentally—or is it incidental—whole pages of advertisements of practitioners of the pretending science. "One hand washes the other." Then it is discovered that the miraculous cure was not a cure, that the treatments have in fact been so painful that the child's condition is possibly worse; that the chiropractor has been relieved of attendance, and that the child resents his muscular ministrations. Does the press give the public these facts? Do the advertisements cease? Not at all. What of the parents and the child? To whom shall they look? Whose duty was it to protect them against ignorance and in-

competence? "The first duty of the state," says Disraeli, "is the care of the public health." When the state permits those with no scientific knowledge, who know nothing of physiology, of anatomy, of pathology, of infection or immunity to treat disease—no matter what the method employed—the state fails in its duty.

The facts in the case are these:

1. The child suffered not from a strange "talking" sickness, but from a form of encephalitis with excitation.

2. The "incessant" talking was in reality intermittent, both before and after the alleged "adjustment."

3. The chiropractic "treatments" did not "cure" the disease as claimed; they had no appreciable effect on its course.

4. The nurse's record shows that the chiropractor gave "treatments" from February 12 to February 23, at which time he was dismissed as the patient's condition gave no evidence of benefit from his "treatments." On the contrary, she was complaining of severe pain along the course of the spine. Since then the family physician has had entire charge of the case.

5. The patient is not restored to health but is still seriously ill.

Medicines and Beverages

The recent ruling of former Attorney General Palmer, permitting the practically unlimited use under certain formal restrictions, of whiskey, wine and beer for medicinal purposes under special rules and regulations, to be placed in effect later, providing the ruling is not reversed in the meantime, has called forth widely different opinions and sentiments.

It may be significant that only one-fourth of the physicians of Ohio have taken out permits for 1921 either for the "use" of intoxicants or for authority to "prescribe" them.

As stated previously in these columns, the medical profession as a whole has been the subject of unfair attack by newspapers and even prohibition enforcement officers on account of the comparatively few but none the less flagrant violations by physicians of the prohibition laws and regulations. There is no doubt but what the majority of physicians who do hold permits to either use or prescribe intoxicants have conformed strictly not only to the letter but to the spirit of the law. Nevertheless there is an apparent difference of opinion on the practicability and necessity of the new regulations.

As a rather representative viewpoint of the public and the newspapers the following extract from a recent editorial from one of the leading lay journals is interesting even though its accuracy is debatable.

"This ruling, if it turns out to mean that beer and wine may be lawfully prescribed in considerable amounts, would make it possible for un-

scrupulous physicians to do a thriving business in enabling people who so desire to obtain these supposedly contraband products solely for beverage purposes. That, in a measure, would defeat the purpose of the prohibition law. The national prohibition commissioner says the ruling will make it more difficult to enforce the law and the professional agitators seem more than usually aroused. We wish the law could be finally interpreted and amended if necessary with promptitude. The country thought it had this question settled and out of the way."

A Look in the Mirror

"Oh, wad some power the giftie gie us
To see oursel's as ithers see us."

Quite infrequently do we have the privilege of an analysis of ourselves by others, as expressed in those few classic words by the famous "Bobby the Bard." However, in an unusual paper the Reverend Mr. J. C. Jackson, of Portsmouth, expresses his ideas of the purpose and ideals of the medical profession and its relation to the public, published on page 265 of this issue, under the title of "A Voice From the Laity."

Very forcefully and convincingly does the Reverend Mr. Jackson express the prime purpose of the medical profession—"service to humanity," far above ism, scism or fad. He also points out that whatever has been proved "good" should be the common property of all, and should be utilized for the relief of the sick.

While in some particulars we may take exception to the statement and the conclusions arrived at by the Reverend Mr. Jackson, we are more than grateful to him for his frank expression. Encouragement should be given to more frequent meetings of the local medical societies open to the public with speakers such as he to interpret relative viewpoints for the better understanding of mutual problems. Perhaps most important of all is the point which he makes that regardless of remedy or method of treatment, thorough training and education are fundamental in order to make a correct diagnosis which of course is of first importance to any course of treatment or remedy.

Government in Medical Practice

That an unlimited extension of governmental powers in dealing with health problems contemplates sickness as the cause rather than a mere link in the vicious chain of social evils including poverty, is concisely stated in the following editorial from a recent issue of *The Texas Medical Journal*:

The Government Should Not Practice Medicine, except to the extent that its own wards may be cared for. For this purpose, the government should employ physicians, and the very best that can be had, at such salaries as will attract the best. The responsibility of the government, national, state and local, for the sick public, lies in

the element of prevention. The effort on the part of well-meaning but misguided individuals to swing the government into the practice of medicine is to be deplored and resisted. The most notable example of this movement is in the matter of health insurance, so-called, the stupendousness of which the proponents of the movement probably had no conception. And now comes the Sheppard-Towner Bill, providing maternity aid on a national basis, which appears to be another step in the direction of socializing the practice of medicine, through the medium of a governmental health agency. Laws for the establishment of health centers throughout the country, under government supervision, are along the same line, and are evidently based on the success of the venereal disease clinics that were conducted by state and federal health departments during the war, many of which have continued in successful operation since that time. The fact that the venereal clinic was a preventive measure has been overlooked.

The solution of the problem lies in the proper co-operation of welfare organizations, with the assistance of the medical profession, which co-operation has always been and will continue to be freely given, in caring for charity cases along with the necessary preventive measures, both in the matter of health and the matter of poverty. The idea that the unfortunate condition of the poverty stricken is due to ill health, is true only to the extent that ill health is but a part of the vicious cycle, the beginning of which lies as much in poverty as it does in ill health.

Dr. John A. Thompson Retires

On the eve of your retirement from the practice of medicine on April 1, the State Association thanks you, Dr. Thompson, for the sincere interest in medical organization you have shown throughout the many years of your membership, and for the valuable contributions you have made to its success. As a member of the Cincinnati and Hamilton County delegation, you have long been a familiar figure at all annual meetings and other conferences and could always be depended on for help in the solution of difficult problems, particularly in the legislative field and on constitutional questions. Your last big job was the chairmanship of the committee which completely revised the constitution and by-laws in a thoroughly efficient manner two years ago. You have earned a rest and the Association wishes you health and all other requisites to the complete enjoyment thereof. You are sure to retain your constructive interest in the welfare of medicine and public health, so the Association bids you to remember it, and extends to you a lifetime invitation to come back from the Brookville, Indiana, stock farm on which you plan to spend your retirement, and participate in its annual scientific and business proceedings and social festivities.

Heart Failure and Tobacco as an Etiological Factor

Reed O. Brigham, Ph. D., Ann Arbor, Mich.

Editor's Note.—Working in the Laboratory of Physiology of the University of Michigan, with 132 students as the subjects for examination, Dr. Brigham found that blood pressure did not vary much from normal in any class of smokers but that the average pulse rate increased in all smokers and was about 90 in heavy smokers. Also the average length of systole was slightly shorter among the smokers than among abstainers, showing a slight irritation of the myocardium in young men, who should have been in the most perfect condition of health. Reverting to laboratory experiments Dr. Brigham found that the striated muscles of frogs, subjected to tobacco smoke, fatigued much more rapidly upon electrical stimulation than muscles from control frogs. This effect is not due to carbon monoxide but to other toxic substances in tobacco smoke. It is notorious that heavy smokers react to anesthetics almost as badly as alcoholics and are prone to develop circulatory paroxysms or depressions. Dr. Cotton in experimenting with new ethers found that certain brands of cigarettes smoked immediately before operation were inclined to produce collapse, while the same depression post-operatively was inclined to be benefitted by cigarette smoke inhalations. The paradox remains to be explained.

THE term *heart failure* is rather vague and does not always signify the same thing to everyone, and the concept of its etiology is in still greater chaos. *However one can say that heart failure always signifies that there is something wrong with the myocardium and that it is no longer able to properly function.* The diagnosis of this loss of function of the myocardium is sometimes difficult, but if one keeps in mind a few simple rules, which the writer has embodied in this paper, it is relatively simple. After determining that there is a loss of functioning power of the heart one must determine the possible etiology before he can successfully treat the case. The etiology is attributed to many sources but here also a few general principles will cover most of the cases and the author has outlined these and added a few new facts which he has obtained in his preliminary studies on the effect of tobacco smoke on the heart and striated muscle of the voluntary type. The term *tobacco smoke* is used here and not *nicotine* because tobacco smoke contains many other substances besides nicotine which have been proved to be injurious.

TYPES OF HEART FAILURE

Heart failure is of two types, (1) that of *congestion*, which is shown by edema in varying degrees of severity and (2) that of *angina*, which is indicated by pain or *pulsus alternans*. These are in all cases due to myocarditis or degeneration of the heart muscle that interferes with its action or will do so in the future. This may be caused by a valvular lesion and extra work placed upon the heart, but this is not the sole cause for large hearts are due to morbid hypertrophy. This fact is shown by producing valvular lesions on animal hearts with surgical intervention and where without infection there was no hypertrophy.

The heart muscle has an enormous reserve power as has been found by recent studies and the somatic muscle will give out before the heart muscle. The size of the heart then is the most important factor in diagnosing cardiac failure

and enlargement always means myocarditis, therefore it is the first point to determine in cardiac examination. The nature of the case should first be determined and then etiology and under the former the following points should be considered:

PATHOLOGICAL CONSIDERATIONS

1. *Enlargement*, which may be either *dilatation* coming on rapidly within two or three days or *hypertrophy* which is more gradual. This is determined by slow heaving which lifts the chest wall, by the position of the apex beat and by the area of cardiac dullness.

2. *Aortic insufficiency* is due to infection and gives a characteristic paleness to the patient accompanied by a diastolic murmur which means an organic lesion, and a characteristic *Corrigan pulse*, i.e. a high pulse pressure. A mitral diastolic murmur here means nothing because the regurge throws the valve into the blood stream coming from the auricle with a resulting *Austin Flint murmur*.

3. *Aortic stenosis* must have a harsh systolic murmur transmitted to the neck, must produce a thrill and must give a slowly rising pulse with a low pulse pressure.

4. *Mitral stenosis* is always due to infection which affects the heart muscle and is diagnosed by the systolic murmur which is often transmitted to the axilla and back and a cyanotic state of the patient.

5. *Auricular fibrillation* always means a myocarditis of the auricle. It may be temporary but if permanent it is a chronic myocarditis and it is recognized clinically, *first* by a complete irregularity of the heart, *secondly* by a rate above 120 which can be forced up by amyl nitrite, *thirdly* by a permanent high rate, and *fourthly* because it is most common in cardiac decompensation.

6. *Heart block* may be complete or partial and it is due to a myocarditis affecting its pathology in the *Bundle of His* and should always be looked for in a rate below forty.

7. *Cardiac function* is the most important con-

sideration to the patient, that is for him to know whether his heart will function or not. If there is congestion of the lung accompanied with bubbling râles at the base, edema and enlarged liver, the diagnosis is clearly myocarditis, which is usually accompanied with valvular lesion, including both mitral and tricuspid, whether both are heard or not. Dyspnea is often complained of by the patient and in the young man, if there are no heart signs, it is usually not due to the heart but in the older man it may be due to this cause.

8. *Arterial sclerosis* is usually accompanied by myocarditis and the blood pressure will be found over 180. The coronary vessels will usually show changes.

9. *Pulsus alternans* is easily determined by a regular rhythm at the radial pulse, first a weak and then a strong beat and this may be exemplified, when taking the blood pressure, by cutting out the weak beats and thus reducing the rate one-half. This condition of myocarditis has a bad prognosis.

10. *Aortic aneurism* is diagnosed by the pulsation in the aorta and always means a syphilitic aortitis and myocarditis.

OTHER FACTORS

The etiology, as studied with the history of the case and accompanied by the physical findings, means much in the study of heart cases and one should consider the following etiological findings:

1. *Congenital heart disease* is exemplified in the blue babies and children, which cases rarely live to middle life and are easily diagnosed.

2. *Arterial sclerosis* may be an old age process or a hypertension or due to nephritis, which cause should always be considered and a careful study of the urine made.

3. *Tonsillitis and rheumatic fever infections* often give a resulting endocarditis which may spread to a myocarditis and pericarditis. Such infections usually occur before the age of thirty years with only a moderate enlargement, usually leaving vegetative growths on the endocardium and valves but these rarely form emboli. Either the mitral or the aortic valves may be affected with about even chances, but when the aortic are affected there are fewer arterial signs, such as the *Corrigan pulse*, and no aneurisms will develop in *contra distinction* to the next etiological factor from which it must be distinguished.

4. *Syphilis* does not produce congenital lesions but usually occurs after the age of thirty as opposed to the rheumatic type. There is no stenosis because there are no vegetative growths but the myocardium is greatly affected, and there is marked enlargement resulting in the so-called *bovine heart*; the *Corrigan pulse* is always a suspicious symptom; pulsation in the supra-sternal notch, aneurisms, pain beneath the sternum and aortic enlargement, as shown by the X-ray are

all common symptoms. In these cases a Wassermann test will help confirm the diagnosis.

5. *Toxic substances* must also be considered as producing myocarditis with the accompanying symptoms. The most marked symptom of toxic products is tachycardia such as is noticed in fevers, typhoid and pneumonia; from bacterial toxins and toxemia as exophthalmic goiter.

Further among the toxic substances one must think of drugs and these may either affect the nerves as atrophine on the vagus or they may directly affect the heart muscle. Among these drugs tobacco is often mentioned and popularly talked about as *tobacco heart*, but the writer has never had a tobacco heart scientifically demonstrated.

EXPERIMENTAL OBSERVATIONS ON TOBACCO TOXICITY ON THE HEART

The foregoing discussion of heart failure due to myocarditis and a consideration of the chief etiological factors shows that, in the complete analysis, there is only one cause of heart failure but that there are a number of etiological factors. The next question then is, may tobacco be one of these etiological factors? This can only be determined by a scientific study, which the author has been pursuing for the past three years, and a few preliminary results of these researches are herewith presented, which seem to point rather to an affirmative conclusion, although the popular claim is that tobacco has no affect on the heart.

Records were taken on 132 young men, in the Laboratory of Physiology of the University of Michigan, between the ages of 20 and 25 years, tabulating blood pressure, pulse rate and the length of systole. The men were divided into four classes, namely, (1) non-smokers, (2) light smokers, (3) moderate smokers, (4) heavy smokers. The blood pressure showed no variations but averaged approximately the same in all classes. The average pulse rate increased gradually from 82 in non-smokers, 83 for light smokers, 86 for the moderate smokers, to 90 for the heavy smokers. The average length of systole was slightly shorter among the smokers than among the non-smokers. This increased rate indicates a slight irritation of the myocardium or the nervous mechanism and the picture is that of a slight myocarditis. One must bear in mind that in these figures only young men were recorded and that if older men were studied greater differences might be expected because of the longer toxic use of the drug.

These striking preliminary results led the author to make some experiments on the striated muscles of frogs, after subjecting them to tobacco smoke, and some very striking results were obtained. The muscle from the frog, subjected to tobacco smoke, fatigued much more rapidly upon electrical stimulation than a muscle from the control frog. To test that this was not due to smoke alone as carbon monoxide, another frog

was given smoke from corn silk and the muscles reacted like those of the normal frog and not like those from the frogs subjected to tobacco smoke. These results show that tobacco smoke has a toxic effect upon voluntary muscle, and one can draw conclusions from these results and the observations upon the heart that tobacco smoke has a toxic effect upon heart muscle and therefore should be considered as one of the possible etiological factors in myocarditis. It is the hope of the author that further studies will reveal greater evidence of this fact.

The author wishes to express his appreciation for the use of the laboratories and assistance in this research work to Drs. Lombard and Cope.

CONCLUSIONS

1. Heart failure is due to myocarditis.
2. There are a number of etiological factors for myocarditis.
3. Tobacco smoke may be considered an etiological factor in myocarditis.

1014 CORNWELL PLACE.

Anesthesia in Obstetrics*

Arthur H. Bill, M. D., Cleveland

Editor's Note.—In striving for the ideal in the pain-relief of labor it is common sense to know all methods intimately, to be prepared to resort to any and to select the best features of all according to the demands of the particular labor which is being conducted, the condition of the mother and unborn child as well as the facilities at hand. At the present time labor may indeed be made very comfortable. The pains of the first stage may be controlled by the judicious use of alkaloidal amnesia. The pains of the second stage may be mitigated by the use of nitrous oxide or ether and the stage of expulsion by a combination of both. Dr. Bill again sounds the warning that pregnant and laboring women are not immune to the dangers of anesthetics when carelessly given. He has discarded the use of chloroform in labor and substituted the use of ether or nitrous oxide-oxygen according to indications. The administration of anesthesia during labor is an art in itself and is best accomplished by an obstetrician who is thoroughly familiar with anesthesia or an anesthetist who knows much about obstetrics.

SO much has been said and so much written during the past few years concerning anesthesia, and analgesia and amnesia in obstetrics that it might seem that the consideration of the subject has been somewhat over-done. Yet there is still apparently a wide difference of opinion in regard to the particular anesthetic or analgesic to be used, while there are also those who would ever decry the use of *any* anesthetic, basing their argument on the custom of past generations, upon the dangers of anesthetics in general and their effect upon the progress of labor, and even upon scriptural writings. Of the various reasons given, probably the only one worthy of consideration is based upon the possible dangers to mother and child, so that our efforts should be directed toward seeing whether or not, with proper care and proper selection, we may reduce them to a minimum.

COMFORTABLE VS. PAINLESS LABOR

As has happened in all other branches of medical practice, so in obstetrics, from time to time, various methods have been promulgated and published under glaring titles, dubbed with euphonious names, and these have, in many instances, suggested the faddist, and in some cases, I fear, have almost bordered on quackery. First of all I would speak against the fad with its misleading claims for painless labor, for perhaps we shall find some good in most of the methods used and

shall occasionally resort not to one, but to the best features of all, selecting them according to the particular labor which is being conducted, the condition of the patient and unborn child and the facilities at hand. Thus a method which may be advisable or permissible in a well-organized hospital might not be possible or practicable in homes; or a method followed when plenty of assistants are at hand might be out of the question when one is handicapped for help or is even working alone. Therefore the foolishness of promising a patient in advance as to the exact plan to be followed.

No doubt the easiest way for a physician to handle a case of labor is to give the patient nothing at all, that is, if he is callous enough not to heed her groans and cries. But the dictates of humanity tell us that the agony of childbirth should be relieved, if such a thing is possible, and experience teaches us that it is possible. Such a thing as an absolutely painless labor seldom occurs. Nevertheless the suffering may be reduced to a minimum and the patient carried through what she would call a very comfortable labor.

METHODS OF ANESTHESIA, ANALGESIA AND AMNESIA

In the discussion of the various methods used I shall follow largely the plan which is carried out in the service of the Cleveland Maternity Hospital, where cases are handled both in the hospital, where every facility is at hand, and in the homes of dispensary patients, where often

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there is nothing whatever but what is carried there by the physician at the time of labor. I do not advocate any fad and claim little originality of method, but wish rather to emphasize the fact that it is not necessary for women to suffer during labor. We have two general classes of methods, (1) general anesthesia, and (2) analgesia or amnesia.

For general anesthesia and analgesia we may mention the use of ether and nitrous oxide—oxygen as the best. For amnesia, morphine and scopolamine.

In general it may be said that the general anesthetics are to be used in the *second stage*, while the analgesics and amnesics, so-called, are of service only in the first stage though in the case of the former, the scope may be broadened somewhat to include a varying part of the first stage. Those who have made it a practice to give a few drops of anesthetic at the very end of labor, just as the head is coming over the perineum, will find that they can perfectly well begin the administration much earlier, without interfering to any serious extent with the progress of labor, certainly as early as the beginning of the second stage, when the harder bearing-down pains commence. It is our experience that in many cases instead of this method retarding the labor, the reduction of the pains induces the patient to make better use of her contractions and to bear-down where otherwise she would hold back on account of the pain.

To relieve the pain of labor it is not necessary that the patient be completely anesthetized. With the onset of each pain an anesthetic is immediately applied and then withdrawn at the end of the pain. To get the best results the application must be made very quickly, that is, before the patient feels the full force of the pain. After having taken several deep breaths she has really a primary anesthesia and will be inclined to make use of her pain, and will be conscious enough to follow instructions in this respect. One can usually anticipate the pain by placing the hand upon the abdomen and feeling the beginning of a contraction before the patient herself is conscious of the pain.

As the labor advances and the pains become closer together the anesthesia is gradually deepened until the head is on the perineum, when it is carried to the extent of complete anesthesia and the head shelled out by what is known as Ritgen's maneuver, while the patient knows nothing about the birth. For this final anesthesia, complete relaxation is desirable, for thereby the dangers of laceration are minimized.

CHOICE OF ANESTHETIC

In the choice of an anesthetic I should say that the main consideration should be safety. In this connection let me speak against the impression that women in labor are immune to the dangers

of anesthetics. To be sure they react in a somewhat better way than they do when not pregnant but are by no means immune. Careless administration of a dangerous anesthetic may be attended even in childbirth with disastrous results. Chloroform, on account of the dangers associated with its administration, has long since been practically given up as an anesthetic in general surgery, at least in this climate. That it is still very commonly used in obstetrics is due merely to a long-standing custom, for it has no practical advantage over ether, which is on the other hand far safer. I personally discarded chloroform ten years ago and would emphatically urge the substitution of ether for it. However, for obstetric work ether should be given in a manner different from that commonly used in general surgery. Thus, instead of the open or drop method, one should be chosen which gives a greater volume in a given time, such as the closed cone method or administration by an apparatus such as that known as the "Ben Morgan."

In nitrous oxide-oxygen we also have a valuable agent. Any advantage, which it has over ether in normal cases, however, depends really upon two facts. *First*, that it does not relax, and *second*, that some patients find it pleasanter to take. The former characteristic is an advantage in the latter part of the first stage and part of the second stage in a small proportion of cases, in which the pains are lacking in force. It is a disadvantage in the latter part of the second stage, that is, when the head is coming over the perineum, when relaxation is so much to be desired. For the relief of pain ether is more effectual. It is our custom when administering nitrous oxide-oxygen to add ether during the latter part of the second stage or even to turn to ether entirely for the birth. For in many cases there comes a time in the second stage when the pains are not sufficiently relieved by nitrous oxide.

AVOIDING POST-PARTUM HEMORRHAGE AND OTHER DANGERS

Naturally in such a limited time we cannot go over all the pros and cons of anesthesia, but the objection most worthy of consideration lies in the danger of post-partum hemorrhage. I believe that with any general anesthetic there is a slight increase in this danger making the greatest prophylactic precautions necessary, and I would urge, for this purpose, the routine use of drugs which stimulate uterine contractions, *namely* a pituitary preparation and ergot. In this way the danger may be effectively offset.

In our experience general anesthetics, which are quickly eliminated, do not increase the danger to the child, although to be sure a small part of the anesthetic passes over to it. The same cannot be said of the drugs which are commonly administered hypodermically, *namely* scopolamine

and morphine. If these are given late in labor, the child, when born, often remains in a state of apnea from which it is resuscitated with difficulty, and in a small percentage of cases attempts at resuscitation meet with failure. This is especially true in the case of premature babies. The danger to the child while still *in utero* is slight. The danger to the child, with its small mortality, has apparently completely turned the tide against the much advertised morphine scopolamine treatment, and has practically thrown it into discard. Yet the splendid effect of amnesia upon the mother makes us loathe to abandon these drugs, but rather induces us to merely curtail their use and keep within safe limits.

While in general anesthesia we have a means of relieving the latter part of labor, yet in the cases of primiparae and a small percentage of multiparae, whose labors are very similar to those of the primipara, in whom the first stage of labor lasts for twelve or fifteen hours, the greater part of the labor is not covered by the general anesthetic. To be sure this is not the severest part of a labor, yet in many cases, through loss of sleep and nervous strain, these patients are pretty well worn-out by the time the second stage arrives and hence incapable of using their best efforts in this so-called working stage. In morphine and scopolamine amnesia we have a means of relieving the first stage pains of labor and the only thing that is essential is to do it in such a way as not to impair the child's chances of viability. We find that clinically the effects of scopolamine wear off sufficiently to depart from the danger zone in three or four hours, and that if it is not given within four hours of the birth of the child, the danger of apnea is reduced to a minimum. This means that no scopolamine should be given after the cervix is three-quarters dilated in a primipara. After this period, as soon as the patient shows signs of coming-out from under the effects of the drug, the general anesthetic is given, either nitrous oxide-oxygen or ether, according to the judgment of the obstetrician in the individual case.

METHOD OF USING AMNESIA

The best method of administering morphine and scopolamine is that of using relatively small and often repeated doses, so that the patient at no time receives a large amount. The first dose may be given relatively early in labor, that is, as soon as the pains are so regular that they will not be stopped by the administration. A perfectly good indication of this time lies in the patient's own feelings, that is, whenever she feels that her pains are severe enough to need relief, a hypodermic may be given. Thus morphine and scopolamine is used simply as a preliminary to the general anesthetic, just as in general surgery it is quite commonly given as a preliminary to the general

anesthetic, relieving the fear of the patient and putting her in such a condition that she takes the anesthetic better than otherwise.

Experience teaches us that scopolamine does not as a rule retard the first stage, in fact the opposite is more commonly the case. However, such treatment is not without its occasional difficulties and the patients need close watching for they sometimes become excited and unruly. Therefore, in private homes, when sufficient assistance is not at hand, it is not an especially practical method. As a rule however, patients are very quiet and sleep soundly between the pains, waking in a dreamy way during the pains and falling off to sleep as soon as the pain is over. If there is no interval between the scopolamine stage and the anesthetic stage the patient has little memory of the labor.

CONCLUSIONS

From what has been said you will see that morphine and scopolamine are used only in the first stage of labor, and very seldom in multiparae, for in their case, because of sometimes extremely short labors, there is danger of the scopolamine being given too close to the time of the birth. In practice in private homes, even though anesthesia may not be carried out to the same extent as in a hospital, much more may be done in this respect than is the general custom. For this general use let me again urge ether as by far the most practical anesthetic which we have, and emphasize the fact that its administration may be begun much earlier than is generally thought.

The administration of anesthesia during labor is an art in itself and is best accomplished by one who is familiar not only with the anesthetic but with obstetrics as well. It is performed in an ideal manner by a well trained obstetric nurse who has also had a thorough training in anesthesia.

In conclusion we may say that in morphine-scopolamine, nitrous oxide-oxygen and ether we have sufficient means of controlling the pains of labor and that all of them have their advantages, so that instead of advocating any one favorite method, the obstetrician, who would do the best by his patients, would do well to familiarize himself with them all. In hospital practice it is not an unusual thing to find primiparae given first morphine and scopolamine, then nitrous oxide and oxygen, and finally ether. We may also say that in this way patients may be given some form of anesthesia or analgesia whenever they feel that they need it, no matter how early in labor, but just what is first given depends upon the individual patient and the character of the labor, and must be decided at the time of labor and not in advance.

What the General Practitioner can do for the Eyes

Clarence A. Tyler, M. D., Alden, N. Y.

Editor's Note.—In a previous issue the attention of readers of *The Journal* was called to the value of "ten minutes with the urine," and especial stress was laid on the diagnostic importance of the phosphatic index. Dr. Tyler, in a very practical way, shows how the phosphatic index may determine the underlying cause of certain obscure eye conditions and determine a curative course of therapy. Some interesting illustrative cases are given in which considerable difficulty had been found in arriving at a correct diagnosis. Certain reflex headaches, neurasthenic conditions associated with deficient nerve cell nutrition, as well as some inflammatory conditions of the eye have a disorder of the nervous mechanism behind them and diagnosis by means of the phosphatic index and proper treatment usually result in speedy and permanent improvement.

RECENTLY Dr. F. Park Lewis, the eminent authority on ophthalmology, has wisely, and practically as a pioneer, pointed out the great advantages accruing to the oculist who treated his cases after an opinion had been obtained from others, or by means of what he described as *group diagnosis*.

Along similar lines Dr. Glosser, a well-known oculist, says, "Fully 80 per cent. of diseases of the eye have a cause external to that organ; we are incapable of ascertaining the same, and not competent to treat them if we knew."

Drawing conclusions from such testimony, the general specialists must form but one opinion: the oldest specialty in medicine has sounded the clarion call for a return to its mother for help and succor.

REMOTE CAUSES OF EYE TROUBLE

Physicians all agree, or should do so, that there is always a cause for illness. We have been taught that fully 7 per cent. of the complaints of human beings are of a functional nature, that is, there is no underlying pathological condition present. It may be granted that the underlying condition may not be an anatomical change, but in every case some abnormality can be found to exist, even though it be but temporary in nature.

Dr. Howe, in his work on *Diseases of the Eye*, says, "normal eye muscles when used to excess, or those that are imperfectly balanced frequently give rise to fatigue, which may be local or general; fatigue which may commence in the eye and extends to other parts of the body, (or vice versa)."

"When fatigue does not disappear with rest; when it becomes a condition constantly present, and associated with other disturbances, it is called Neurasthenia; or the *American Disease* by others."

No one can deny that the eyes may be a cause of various symptoms displayed by that organ, but in the great majority of cases, remote causes will be found to be the true factor; and it is these remote causes that must receive attention first if the reflex manifestations in the eyes are to be relieved.

We know that the great majority of individuals that consult oculists or opticians do so for head-

ache, and that one of the most important symptoms of neurasthenia is headache.

Neurasthenia is a systemic condition pure and simple. It is true, the eyes may at times be the primary cause of this condition, but in a majority of the cases they simply take part as a reflex manifestation.

Briefly stated, the eyes with their appendages (muscles) being entirely under control of the nervous system; their system should be in as nearly a normal condition as possible before any attempt is made to remedy eye manifestations which may have their primary cause in the brain cells.

We know how to determine anemia by estimating the amount of hemoglobin present and renal activity by estimation of urea; nerve metabolism may be shown by the amount of alkaline phosphates in the urine, and this is known as the *phosphatic index*.

THE PHOSPHATIC INDEX IN RELATION TO EYE CONDITIONS

An estimation of the alkaline phosphates by aid of the phosphatometer is a very simple procedure, taking but a few minutes and using the second urine passed in the morning. The index gives most valuable aid, not only in differentially diagnosing eye conditions, but in determining various other complications that may be present. In many, if not practically all cases of neuritis, neuralgia and the like, the writer has obtained most happy results by using medication as indicated by the amount of alkaline phosphates present.

The original articles of Dr. J. Henry Dowd, the originator of the phosphatometer for taking the index, appeared in the *N. Y. Medical Record*. I briefly repeat some of his conclusions:—

(A). The nervous system controls and operates the human body at all times.

(B). Blood, bone and muscles have a specific nutrition or food, so also has the nervous system, —lecithin, nuclein and phosphorus.

(C). Acid sodium and potassium phosphate, found in the urine as the alkaline phosphates, are the end products of the afore mentioned substances, by metabolism; an estimation of the amount is the phosphatic index.

(D). In the absorption of nutrition by the nerve-cells, sufficient is not only taken for the daily calls for energy, but to create a reserve, which may be necessary in times of stress, when from illness or otherwise, sufficient nourishment is not taken by the mouth.

(E). The alkaline phosphates in the urine show how nutrition is being used, and the amount in reserve.

(F). Increased destruction of nerve nutrition is shown by an increase in the amount of alkaline phosphate eliminated. When such a condition is allowed to continue, sooner or later the reserve will become depleted and we find nerve tire, or neurasthenia with all its distressing symptoms.

An estimation of the alkaline phosphates, by aid of the phosphatometer is so well known that only a few words are necessary regarding its use. The second urine passed in the morning should always be used, and if the earthy phosphates are present in any appreciable amount, sufficiently so to cause marked opacity, they should be filtered out. After adding the solution to the urine the phosphatometer should be inverted several times to allow thorough mixing of its contents.

When making a diagnosis from the alkaline crystals, the precipitate should stand at least twenty minutes.

ILLUSTRATIVE CASE REPORTS

Although the writer uses the phosphatometer in every case that seems bothersome, and especially where recognized treatment seems to be of no avail, I will, in briefly reporting the following cases, confine myself to conditions, in which the eyes were the seat of the most bothersome symptoms. All these cases were treated by skilled specialists, but results did not follow; they were either seen by me for other conditions, or a phosphatic index was asked for.

CASE 1.—Mr. A., aged 67, called complaining of stomach trouble. He said for months that he had headache, twitching of the eyes, indigestion and could not sleep; an oculist was to operate on his eyes in ten days for partial tenotomy. Careful examination revealed slight enlargement of the prostate gland; no pus in the urine; an occasional cast, but no evidence of Bright's disease; blood pressure was normal. The phosphatic index was 85 per cent. minus and crystals showed very marked nerve cell starvation. A preparation of phosphorus, nux vomica and cannabis indica was given in milk after meals. Most rapid results followed. In ten days he reported being greatly relieved, and especially so as regarded his eyes. Four weeks later he brought the pleasing news that the oculist had postponed the operation indefinitely and he had not been operated upon three years afterwards and has had no trouble from his eyes.

CASE 2.—Miss C., aged 37, was for a long time bothered with indefinite symptoms; headache, in-

somnia, "hot flushing," as well as indigestion with marked gas accumulations; backache. Using the eyes for any close work such as sewing or reading, was sure to be followed by an exaggeration of all the symptoms named. Refraction had relieved her for a time, but she soon drifted back to her former condition. An index was made and found to be 150 per cent. plus. This case was so long standing, and a mixture of bromide of gold and arsenic was ordered, ten drops three times a day in water, increased one drop daily to twenty. In three weeks she reported an abatement of practically all symptoms; she was able to go to the theatre, or pictures for the first time in three years; and she had abandoned the glasses.

CASE 3.—Miss K., aged 32, had an almost exactly similar train of symptoms, except that going to the theatre or pictures did not seem to aggravate her condition. She had previously suffered from a nervous breakdown lasting several months. The refractive error had been carefully corrected, but after weeks with glasses, the condition was not relieved to any extent; her every day existence was most unpleasant; many symptoms of melancholy were developing; she often thought that life was not worth living. Consulting for pain in the shoulder (brachial neuritis), her phosphatic index was found to be 90 per cent. minus. She was at once placed on the same phosphorus mixture, with the addition of fl. ex. valerian for insomnia. She left town and was not again seen for a year, when she reported as being relieved shortly after commencing the medicine; she now considers herself well, did not use glasses, although busily engaged in her school work; and she had gained 20 pounds in weight.

Dr. J. J. Finerty, ophthalmic surgeon, reports the following case:

CASE 4.—J. W., aged 53, had severe pain in the left eye; photophobia accompanied by more or less headache; the diagnosis was ulcer of the cornea. Active treatment with the cautery, calomel and the like seemed to relieve for only a few days at a time; he was under my care for several weeks; no internal medicine had been given. Being unable to get an index on this case, but having seen one or more of a similar nature, in which rapid results had followed the use of nerve-cell nutrition, I ordered the mixture of phosphorus advised by Dr. Tyler; at the same time I stopped all local measures to watch results. In a week all pain had vanished; the ulcer was entirely healed; and it had not returned two years afterwards.

CASE 5.—Probably one of the most striking cases in which the eye was involved, yet the cause was found to be positively constitutional, because the patient recovered promptly, was that of Mrs. E., aged 55. For several weeks she had been bothered with severe headache, insomnia, photophobia, indigestion, redness and pain in the left eye that was very excruciating at times. Two prominent oculists had seen her repeatedly; their

diagnosis was iritis. A Wassermann test was negative; X-rays of the teeth were also negative; rheumatic remedies had given no relief. One oculist had given the opinion, and this was confirmed by the other later, that she would lose the eye. Being referred for examination, a slight trace of alumin was found; indican was greatly increased as was also uric acid with free uric acid crystals in the urine; no sugar, pus or casts were found; the phosphatic index was found to be 30 per cent. minus, all crystals appeared in a semi-starved condition. A diagnosis seemed clear; malassimilation, with a want of nerve force as one, if not the all important cause. To a phosphorus mixture was added caroid, also fl. ex. valerian, three times daily in milk half an hour after food. In two weeks she reported, "no pain in the eye, headache practically gone, sleeping much better, and indigestion seemingly a thing of the past"; the marked redness, already alluded to, had disappeared. Several weeks afterwards this lady reported she had had no further trouble, and that generally she felt better than she had in years.

Neurasthenia was the presumptive cause of every one of the above conditions, save one; that was nerve-cell irritation.

SUMMARY

1. At least 75 per cent. of the headaches have

a cause in neurasthenia; any eye symptoms are simply reflex manifestations.

2. Fully 60 per cent. of the mentioned conditions are due to insufficient nerve cell nutrition; glasses will not relieve the condition until the true cause has been found and rectified; the general practitioner should place patients in the best possible condition before advising examinations by the oculists.

3. At least 75 per cent. of inflammatory conditions of the eye have a general systemic cause; fully 6 per cent. of these are due to the conditions enumerated.

4. Two things are to be gained by a careful estimation of the alkaline phosphates, which show nerve metabolism. If systemic conditions are ascertained and remedied, many patients will be relieved of the necessity of visiting oculists or opticians. When nerve cell defects are found and remedied, and the eyes still give trouble, the oculist may be almost positively certain that quick and permanent results will follow refraction of the treatment of inflammatory conditions involving the eyes.

5. Whenever the alkaline phosphatic deposit is found at N. P. on the phosphatometer, the nervous system, as a cause in any condition, may be eliminated.

Is Strychnia Sulphate a Specific in the Treatment of Tetanus?

T. J. Savage, M. D., Xenia

Editor's Note.—For years the antispasmodic, symptomatic treatment of tetanus was the only recourse in attempting to handle this dread disease. When anti-tetanic serum was first developed it was thought that the condition would respond with the same results as diphtheria, but it has been found that the serum is far more prophylactic than curative. While thousands of tetanic infections were no doubt prevented by prophylactic inoculations in the world war, magnesium sulphate had to be resorted to as a therapeutic agent in an effort to lessen the awful mortality of the tetanus cases that did develop. In view of the fact that Dr. Savage has found the use of strychniasulphate 100 per cent. efficient in the cure of tetanus, in his long years of practice, it would seem advisable that research workers corroborate his clinical results by laboratory experiments and submit a scientific explanation of the therapeutic mechanism involved.

THE thought has often occurred to me that if every physician, who has been in practice 30 or more years, would write a brief report on the drugs or methods of therapy that had served him well in dire emergencies, some valuable and instructive knowledge would be accumulated. Occasionally remedies have been painstakingly developed by research and clinical study and again they have been blundered upon in the midst of apparently insolvable dilemmas.

GENERAL CONSIDERATIONS

"Lest we forget" in the multiplicity of recent remedies and more modern methods of therapy, the old standbys, that have stood us in such good stead, during half a century of use, the writer would like to call attention to the value of strychnia sulphate in the treatment of tetanus.

According to all the records I have been able to consult tetanus is one of the most fatal ailments to which human flesh is heir; and yet, during a practice of 43 years, I have treated 47 cases of that malady with strychnia sulphate, to the practical exclusion of all other drugs, without a single death. I am aware that such a statement seems so extravagant as to be almost impossible or absurd, but it is the absolute truth and susceptible of proof. As a result of my experience I am convinced that if ever there was a cure for any disease strychnia sulphate is a specific remedy for tetanus. I have previously refrained from publishing my experiences and results lest they might be received with ridicule. However the many efforts to prevent and cure tetanus in the war and in industry have finally become so strong an urge of duty that I can no longer keep

from discussing this matter, in the hope that I may yet confer some benefit upon suffering mankind.

While I could burden the reader with a lengthy tabulation of my cases and a detailed description of each, I believe a presentation of several typical case reports will suffice to establish the correctness of the diagnosis and the value of the mentioned remedy.

CASE 1.—Clarke S—, male, aged 17, weight 150 pounds, a strong healthy boy. Soon after beginning the spring harrowing he dropped a heavy harrow on his foot, driving a rusty tooth almost through it, the point failing only to pierce the tough skin of the sole. A few days later the writer was called to see this boy and found him suffering with considerable rigidity of the muscles all over the body. This rigidity was especially severe in the masseters of both sides as well as the posterior muscles of the neck. Every five or ten minutes this boy was having a rigid contraction of the muscles all over the body. At the first visit the axillary temperature was 104°. During the first 48 hours the treatment consisted of a thorough cleansing of the bowels with calomel and castor oil along with the administration of bromides with chloral hydrate, jelsemium, aconite and opiates. During that period the temperature steadily rose until it reached 107 F. The patient became delirious the second day and remained so during the period alluded to. The muscular contractions grew steadily more severe until complete opisthotonos marked every attack.

Seeing that he grew worse hour by hour on the anti-spasmodic, analgesic and febrifuge treatment already outlined, I gave the patient strychnia sulphate 1/30 grain every two hours as a last resort, leaving off all other treatment. Improvement in all symptoms began to become apparent almost at once and during the following 36 hours the temperature fell to normal, delirium was replaced by sanity and only slight stiffness in the muscles of the jaw remained as a reminder of the grave malady, which had proved so nearly fatal.

That was my first experience with tetanus and being a typical example of the traumatic variety had a strong influence over all my subsequent practice. I was taught the lesson that it is not good practice to stick too closely to remedial agents that are only recommended as failures by authorities on therapy. At that time, if I remember correctly, a mortality rate of 60 per cent. and upwards was the common result in cases of traumatic tetanus. Since that date, 1878, anti-tetanus serum has been discovered, developed and come into general use; but even that still falls short of being a very satisfactory method of treatment, the percentage of fatalities being so little reduced by its use. In comparison strychnia sulphate, in my own practice, has proved 100 per cent. effective.

CASE 2.—George H., a boy of six years of age, ran a rusty nail in his foot while wading in a

puddle of water after a summer rain. I first saw this case in consultation after the boy had been given up as hopeless by the attending physician. His temperature was 106°, he was delirious at all times, had marked muscular rigidity all over the body and his teeth and jaws were so tightly clenched that it was impossible to separate them. He had been given all the usual remedies, without the slightest benefit and seemed to present no grounds for a hopeful outcome, but in accordance with my uniform practice I suggested the hypodermic use of strychnia sulphate 1/60 grain every 4 hours. Improvement was almost immediate and within three days the temperature was normal and all violent symptoms had disappeared and the boy was convalescent.

Many other of my cases were almost exact replicas of the two quoted; while others were idiopathic; but all, regardless of cause, were relieved by the administration of strychnia.

During the past 30 years I have suggested the use of strychnia in tetanus to other physicians and they have reported equally good results. Why this agent is not in more general use is a mystery which I am unable to fathom and shall not attempt to solve.

In my opinion its curative action is based on the fact that strychnia acts as a stimulant to the pons and medulla, and as the germs of tetanus seem to exert their deadly power through these nerve centers, by partially destroying them and weakening the nerve currents that should flow through them the strychnia acts in an antidotal manner. May it not be that tetanus causes a paretic condition in these inhibitory centers that normally control spasmodic action and that strychnia restores them to normal activity?

Whether or not its action is susceptible to scientific explanation, those who once use strychnia in a case of tetanus will continue to do so empirically in other cases on account of the clinical results, just as many other drugs, whose action cannot as yet be explained, are empirically used in other conditions.

I should be glad to hear reports from others who have used strychnia in tetanus, as well as from those who may give it a trial on the strength of what is here written, as it affords a great opportunity for the saving of human life, should it act for others as it has for the writer, and I can see no reason why it should not.

122 SOUTH DETROIT ST.

Medicinal Use of Whisky.—In the twenty-four states of the union in which permits for the prescribing of whisky may be issued, there are 112,238 practicing physicians. Of these only 23,379 (29 per cent.) have taken out permits. Evidently the remaining 71 per cent. do not regard whisky as of enough value in the practice of medicine to go to the trouble of taking out a permit. (Jour. A. M. A., Feb. 19, 1921).

Malnutrition Among School Children: Its Causes, Effects and Methods of Correction*

C. P. Knight, M. D., Washington, D. C.

P. A. Surgeon U. S. Public Health Service

Editor's Note.—While malnutrition among the children of war-ravaged Europe has been receiving a great deal of attention the same condition among the children in our own communities and schools has been seriously neglected. Apparently there is an idea that malnutrition cannot exist in reasonably comfortable conditions of life and yet it may be very prevalent in the very midst of plenty. As a result of surveys made in house-to-house canvasses in certain cities, school hygiene studies in others, the results of health center work, community health councils and public health education, Dr. Knight informs us that a great deal can be, has been, and remains to be done in combating the problem of malnutrition among children. The method outlined is of proved value as shown by the accumulated records. Not only do children show a gain in weight but the effects of better nutrition are shown in a general improvement of child health and an enthusiastic co-operation on the part of parents and teachers to maintain the improved welfare of their children and scholars.

Madam Chairman and Ladies:—

I CONSIDER it quite an honor and it gives me great pleasure to be in Cincinnati today to address the ladies of this club on the subject of malnutrition.

Owing to various recent orders, I have found it impossible to prepare an address for this club which I feel would do justice to the subject. I therefore, have jotted down a few salient facts relative to malnutrition among school children, its causes and effects and methods of correction which I will now present to you.

PUBLIC HEALTH SERVICE ACTIVITIES

During the past year, the U. S. Public Health Service conducted, and is still carrying on Field Investigations in Child Hygiene in the State of Missouri. Briefly stated, the projects undertaken, have been:

First, a house-to-house canvass in certain cities to determine the percentage of birth registration and to obtain data relative to the sanitary condition of the home, milk supply and relative income and the relationship between prenatal influence and maternal and infant mortality.

Second, school hygiene studies consisting of monthly height and weight taking, physical examinations followed by an attempt to secure the cooperation of parents, for the correction of physical defects and holdings of nutrition clinics for underweight children.

Third, establishing Health Centers for prenatal, infant and preschool clinics.

Fourth, placing the work on a permanent basis by obtaining at local expense, one or more community public health nurses and school nurses and by forming Community Health Councils.

Fifth; public health education by lectures, exhibits, distribution of literature and newspaper feature articles.

No particular area in the state was selected

but investigations were confined to those localities which offered the best prospect of establishing the work on a self-sustaining basis. Activities were carried on in towns of 3,000 population or more, exclusive of the three largest cities. The survey was conducted in 25 cities last year. Investigations in strictly rural districts were made in only three counties and this was done with the idea of obtaining preliminary data, relative to some intensive rural investigations in the near future.

I have given this brief outline in order to point out the projects undertaken and to show how extensive this survey has been.

UNDERWEIGHT AND MALNUTRITION

It will be noted that under the subject of school hygiene, it was stated that nutrition clinics for underweight children were established. *Our survey showed that in several cities, at least one-half of the number of children attending school, were undernourished.* The question might be asked, what is an undernourished child? Underweight is based on standards which have been arrived at by weighing and measuring thousands of children and averaging the weight for height and age. Children weighing two or more pounds under this average are considered underweight. Those who are 7 to 10 per cent. or more underweight, are in most instances, undernourished or suffering from malnutrition.

CAUSES

The causes of malnutrition are many. It may depend on inherited conditions. Malnourished children may be the offspring of parents of delicate constitution and poor physical development. In some, it is the result of improper feeding or equally poor nursing during the first few months of life.

Physical defects, such as defective teeth, enlarged tonsils, adenoids, and nasal defects, which interfere with proper breathing, this causing insufficient aeration of the blood, help to maintain the child in an undernourished condition. *By far,*

*An address delivered before the Woman's City Club, of Cincinnati, November 5, 1920.

the most important cause is the faulty health habits. In questioning parents and children, it was found that these children, besides physical defects, had many faulty habits such as late bedtime hours, lack of fresh air in the bedroom on account of closed windows, and insufficient or improper food consumption, that accounted to a great extent, for the fact that they were not gaining weight normally.

Some very interesting data were obtained relative to improper diet and faulty living habits. Among one group of 350 children, the parents of whom were closely questioned, the following information was obtained, only six per cent. could be considered as having a well-balanced diet:

- 94% had unbalanced diet.
- 64% lacked fruit and vegetables.
- 54% consumed inadequate milk.
- 42% used meat extensively.
- 36% used sugar extensively.
- 30% were coffee drinkers.
- 75% did not sleep the required number of hours.

The percentage of gross physical defects found on examination were:

- 66% showed fatigue posture including winged scapulae.
- 60% pale color.
- 51% defective teeth.
- 30% were mouth breathers.

EFFECTS

Unless this condition is corrected children become repeaters, are chronic absentees and in later life may tend to chronic invalidism and to such a disease as tuberculosis. In general appearance these children are thin, pale and undersized. Sometimes they are taller than the average for their age. *One of the most striking things about children suffering from malnutrition is their vulnerability. They seem to "take" everything. A majority were sufferers from chronic catarrh; and inflammation of the respiratory tract is readily produced through the slightest exposure. They have but little resistance to acute diseases. Their muscular development is poor; their circulation is sluggish and they are able to take but little exercise without producing fatigue. They develop a fatigue posture; that is, stooped shoulders, flat chest and winged scapulae or shoulder blades. It has been stated that mentally they are usually bright, often precocious. I am unable to agree with this as our findings from questionnaires put to the teachers show that many of these children were backward in their studies and required special attention. Quite a few had to repeat grades. There are some, however, who are of nervous temperament, over-ambitious, constantly active, who appear bright but find it difficult to concentrate. Among these are the habitual coffee drinkers.*

METHODS OF CORRECTION

Corrective methods for malnutrition have been instituted of late throughout the country. The school lunch, class instruction and other methods have been devised. In making a study of this subject, nutrition clinics were inaugurated in quite a few cities in the state. These were called Mother-Child Nutrition Clinics. They were held once a month, just after height and weight taking. The personnel of the clinic comprised an officer of the U. S. Public Health Service, trained woman physician, public health nurse or Red Cross nurse, trained school workers and a nutrition specialist from the State University. It was considered useless to try to correct these habits or improve the child's condition without the cooperation of the parents and plans were worked out accordingly to secure this. Mothers of the underweight children were invited to the school building to be present at the examination and to confer with the nutrition workers. Instead of the usual class work on nutrition, individual mother-child clinics were held. The nutrition worker sat down with the child and its mother and had a confidential talk regarding the child. Questions were asked to bring out the living habits and advice given regarding the correction of these habits. By questioning the child in the presence of its mother, more reliable information was obtained. Experience has shown that in the individual talks, the mother would give information and ask questions she would not do in the presence of other women. Advantage was taken of such opportunity by the nutrition worker to call the mother's attention to any physical defect that has been found by the physician on examination and impress upon her the necessity of having it corrected.

Family physicians, as a rule, see few cases compared to the high percentage among children. This is due to the fact these children do not appear actually ill and are considered by the parents to be "naturally thin" or their condition is attributed to rapid growth. The condition is not taken seriously until pointed out. *This method of attacking malnutrition among children is of proved value. My records, at present show that the majority of the children attending the clinics who followed the advice given, gained in weight, two or more pounds per month, over the normal rate of gain. Those who did not gain, in most instances, were children who were absent during the month on account of illness. Of 1,100 children, 781 gained. The balance, 319 failed to gain.*

Success in improving these underweights is dependent on regular routine in feeding, sleeping and in everything relating to their lives. It is best to put in writing, for guidance of parents, specific rules, with regard to the amount and character of the food, the hours for bathing, sleeping and recreation. Good results are obtained by careful watchful and repeated conferences at

clinics. Although improvement may not be seen at once, it is in most cases sure to come if the mother will co-operate.

This work has stimulated great interest in the

communities where it has been undertaken. There is much more to do and more intensive investigations necessary in the all-important phase of the school child's health.

The Problem of Gastropotosis*

Willard C. Stoner, M. D., Cleveland

Editor's Note.—It is difficult if not impossible to really determine in what measure faulty anatomy, posture and inherited nervous weakness contribute to the incidence of gastropotosis. Clinical observation, however, proves that loss in weight, impaired muscle tone, whether from disease or poor nutrition, heavy lifting, over-work, improper dress, changes in the female pelvis incident to puberty and repeated pregnancies are definite factors in establishing the condition. It is interesting to note that gastropotosis may exist without symptoms and without any change in the secretory or motor function of the stomach; that the symptoms do not necessarily conform to the degree of ptosis. We have no means of knowing, as yet, the sequence in these cases; whether ptosis produces symptoms or whether the condition incident to the symptoms results in ptosis. The important factor in the vicious circle of this condition is an inherent unstable nervous state. Absolute rest with forced feeding to promote nervous stability and increase weight and massage to enhance muscle tone are important simple phases in the successful management of gastropotosis.

THE problem of visceroptosis has been much discussed since the time of Glenard's observation in 1885. Even before that time the condition had been recognized and speculation offered as to its probable causes and clinical significance, but not until Glenard made his observations at Vichy, France, on a large series of gastro-intestinal cases, particularly cases of *nervous dyspepsia*, and took the position that visceroptosis was a common and important cause, was the condition regarded as of great clinical significance. Since that time men, interested in the various fields of medicine such as anatomy, pathology, clinical medicine, and roentgenology, have written extensively on the condition.

ETIOLOGICAL FACTORS

I shall discuss gastropotosis in relation to clinical symptoms in the light of present day medicine. Much speculation has been offered as to the probable cause of a condition that anatomically is comparatively common. Certain observers have contended that the predisposing factors in practically all cases are congenital, that man anatomically is faulty in construction, that he does not have the proper visceral support for a biped. Others contend that the condition is acquired and that congenital factors have no etiological bearing. It is not reasonable to suppose that nature has been faulty in its construction to the extent of encouraging a condition that is anatomically present in 75 per cent. of women and a correspondingly large percentage of men. Anatomists contend that the support of viscera is dependent upon the following factors, (1) Peritoneal ligaments with blood vessel and nerve structure within. (2) Tonicity of the abdominal wall, which maintains intra-abdominal pressure. (3) Atmospheric pressure

and surface-tension of liver to diaphragm. The most important factors are the shape of the abdominal cavity into shelving and tonicity of the abdominal musculature together with the tonicity of the viscera themselves; hence any condition tending to impair these supporting factors tends to produce ptosis. Clinical observation proves that loss in weight, impaired muscle tone, whether from disease or poor nutrition, heavy lifting, over-work, poor body poise, improper dress, changes in pelvis of female incident to puberty with narrowing of waist line, and repeated pregnancies are definite factors in establishing such a condition. It is impossible to measure how much an inherited nervous weakness contributes.

CLINICAL SYMPTOMATOLOGY

What is more important than the determination of causes in individual cases is the proper association of symptoms with the condition of ptosis and the determination what part symptoms play in an individual case. It is common observation to find a marked gastropotosis in the course of a routine examination unassociated with any symptoms whatsoever.

Symptoms that may be present and associated with the condition are as follows, dyspepsia more or less constant, tenderness and dragging relieved on support of lower abdomen or recumbent posture, appetite poor, afraid to eat on account of distress. Abdominal contour shows convexity below the umbilicus and concavity above, abdominal wall relaxed and flabby. Palpation reveals tumor mass, prolapsed kidney. Direct percussion reveals the stomach low with greater curvature at the crest of the ileum or lower depending upon the position of patient and degree of ptosis. A common symptom is lack of nerve reserve in patients who tire easily. Headache and mental depression are frequently present. Many of

*Read before the Northern Tri-State Medical Society, October 26, 1920.

these patients give typical histories of the neurasthenic with nervous dyspepsia and their symptoms are not unlike the vague neuroses that we commonly see where all findings are negative. It is absolutely impossible to know what the sequence of events may be in these cases, whether the inherent nervous instability with poor nerve tone and poor nutrition may result in ptosis or whether ptosis may induce the nervous and dyspeptic symptoms. One cannot know which is the cart and which is the horse. A vicious circle is established that must be broken and the treatment or management is the same for either.

DIAGNOSTIC POINTS

Interestingly the motor function of the stomach is not impaired in most cases and it is only in the severe case that atony occurs. The gastric secretions give no significant findings and closely parallel those of nervous dyspepsia without ptosis. Gastric catarrh is not common. In diagnosing these cases we must rule out extra-gastric lesions. The X-ray is a valuable means of confirming findings but the simple method of percussion according to Coenheim makes it possible to outline a low stomach in a big percentage of cases. The X-ray has given a big impetus to this problem and has overemphasized the seriousness of the condition. It can no more be made conclusive in this problem without clinical examination than in establishing the presence of pulmonary tuberculosis at the expense of clinical diagnosis. This fact is established that one can not get deductions as to the function of an organ from its shape and position alone. It is a question of pathological physiology, that even a marked departure from the anatomical normal does not necessarily produce abnormal function. The so-called *habitus asthenicus* type makes up a certain per cent. of these cases in which you have a tall slender individual with a long thorax and abdomen, poor nutrition, poor poise and a marked ptosis. The patient's history is typical,—complaints of undue tiring, mental depression, headache, nervous dyspepsia and constipation. It is not uncommon to find an associated pulmonary tuberculosis. This is the type of patient that goes from doctor to doctor, is neither sick nor well but always ailing. Such a patient is a co-ordinated expression of constitutional inferiority. The diagnosis of visceroptosis is not difficult to make but to determine what part the condition plays in the symptoms present is extremely difficult. The prognosis depends upon the management and cooperation of the patient.

MANAGEMENT AND TREATMENT

Management or treatment consists of a prolonged period of absolute rest in bed and this means both mental and physical rest. (2) Forced feeding with a nutritious, digestible diet, feeding four or five times daily instead of three. (3) Massage, preferably a simple method of abdomi-

nal massage that can be performed by the nurse or attendant. The important thing in management is to increase weight and enhance the patient's muscle bone. Improvement of the nervous and mental state is equally important.

CONCLUSIONS

- (1). Gastropotosis may exist without symptoms and without any change in the secretory or motor functions of the stomach.
- (2). That symptoms do not necessarily, in any way, conform to degree of ptosis.
- (3). That we have no means of knowing the sequence in these cases, whether ptosis produces symptoms, or whether the condition incident to the symptoms results in ptosis.
- (4). That the important factor in the vicious circle in these cases is the inherent unstable nervous state.
- (5). That the results of simple management of these cases justify the method.

1836 EUCLID AVE., UNION BLDG.

The William F. Koch Cancer Remedy—In 1918 William F. Koch graduated from the Detroit College of Medicine and Surgery. Less than a year after his graduation Doctor Koch declared that he had "developed a real specific cure for cancer." In the *Detroit Medical Journal* for July, 1919, there appeared a brief article by William F. Koch entitled "A New and Successful Treatment and Diagnosis of Cancer." A more extensive article was published in the *New York Medical Journal* of Oct. 1920. As a result of the publicity given the Koch treatment, the Wayne County (Detroit) Medical Society appointed a committee to investigate the matter. The committee reported that Doctor Koch had submitted no proof that his injections had any particular merit and concluded that the study was entirely experimental and improperly supervised. Evidently the most that can be said for this alleged cure for cancer is that the claims made for it have not been supported by independent investigators (Jour. A. M. A., Feb. 12, 1921, p. 466).

The William F. Koch Cancer Remedy—A physician writes about a case treated by Doctor Koch and submits a letter written by Doctor Koch a week before the woman died of generalized carcinomatosis. The two letters bring out the optimism engendered in the husband of the poor cancer patient by the widely vaunted treatment of Koch. Herein lies the most pernicious feature connected with the exploitation of alleged cures for cancer, tuberculosis, etc. All of such remedies, whether fraudulent or merely worthless, produce a profound and temporary change in the patient's condition. It is this that tends to warp the judgment, not only of the layman but also of the physician (Jour. A. M. A., Feb. 19, 1921, p. 537).

Enlargement of the Prostate*

M. L. Pratt, M. D., and R. B. Pratt, M. D., Bellefontaine

Editor's Note.—Early in the evolution of the surgery of appendicitis, granting an average surgical ability, the mortality rate depended more upon the period of the development of the disease and the intrinsic dangers of general peritonitis than upon the skill of the operator. In the opinion of Drs. Pratt there is an almost exact parallel today in the handling of benign enlargement of the prostate, except that the profession has not yet accepted the dictum of early operation. If the prostate were removed at the time the obstruction began, while the condition was still local and long before cystitis, ascending infection and renal insufficiency had undermined the patient's general health and changed his operative risk from comparative safety to extreme hazard, the mortality rate would fall profoundly from its present rate of 5 to 15 per cent. and the personal equation of the average general surgeon vs. the prostatectomist would become more and more unimportant.

WE make no apology in offering this frequently discussed subject for your consideration, nor for the absence of any radical or novel views concerning it. Prostatic enlargement is so common, so far reaching in effect, so amenable to surgical treatment, that we feel justified in presenting, not a complete discussion of the subject, but rather a review of certain outstanding points in the modern-day conception of the disease and its treatment, which we have judged, from our relatively limited experience, to be highly important.

GENERAL CONSIDERATIONS

We do not concur in the opinion of a recent writer that the unsettled condition of the world affairs is traceable to the perturbed decisions of international figures bothered by their prostates; nor that it is a *prostatic peace* which has been thrust upon us; nor that the absence of prostatic pathology would promise the millenium or even the elimination of geriatrics. It is, however, a most important subject, one to be constantly born in mind by the internist and surgeon in the presence of any acute genito-urinary symptomatology and most certainly in the investigation of all chronic conditions in the male past forty years of age.

Prostatic enlargement is an expression of old age. It can, however, no more bear the indictment of a cause of senescence than can vascular fibrosis, renal and cardiac changes, altered mental states or endocrine upsets, incident to this final period of existence. Nature has ordained that in all living matter there shall be instituted a period of decline following a relatively fixed period of productivity. We call this third and final subdivision of life—old age. It is involuntary and destructive to the individual. It is given to man to die. In the preparation therefor—what Samuel Johnson called the “cold gradations of decay”—it is only to be expected that the body tissues mark the progressive steps and this is invariably so and is to be found in the universal chronic degenerative processes ranging from wrinkles to calcified vessels. It is equally positive that we have many examples of what

may be termed a healthy old age wherein none of these changes may progress to a state causing symptoms and recognized as disease. Therefore, while the climacteric in the male is marked by positive and invariable changes in the prostate, often they give rise to no symptoms or to only slight annoyance. A fair proportion are characterized by permanent evidence of bladder obstruction and the results of urinary stasis. Sir Henry Thompson states that 34 per cent. of men over 60 years of age have enlargement but that only one-half of them have troublesome symptoms. Freyer believes that 33 per cent. of men past 55 have some enlargement. It is the symptomatic group with which we are particularly interested.

WHAT IS THIS ENLARGEMENT?

The French school, headed by Motz, Perearnau, Marquis and Cuneo, insists that the so-called enlargement of the prostate is not in anywise an affection of that gland but is one of the suburethral glands lying posterior to the urethra between the internal sphincter and the verumontanum and supports its contention by the fact that urethral lengthening occurs in this disease only between the internal sphincter and the veru; that the ejaculatory ducts are found depressed posteriorly by the enlargement, and by other interesting evidence.

The English and the American schools, on the contrary, consider the peri-urethral glands as only rarely involved and the enlargement to be essentially prostatic.

The microscopic pathology is also in dispute. Descriptive phrases include adenoma, adenomatous, adenomatosis, adeno-fibroma, fibromyoma, fibrosis, sclerosis, and fibrous, glandular or mixed hyperplasia.

Terminology is equally uncertain and inexact. “Hypertrophy” in its true sense does not occur. “Enlargement,” while least obnoxious to the critic, is objectionable in that under this heading is usually included the small, hard prostate which may not be enlarged and that enlargement may be caused by other conditions such as tuberculosis, cancer, syphilis and abscess.

The terms “hypertrophied” or “enlarged” prostate may, however, be condoned by their general

*Read before The Northwestern Ohio District Medical Association, Tiffin, Ohio, October 26, 1920.

usage and in that they come to convey a very definite condition and train of symptoms to the medical mind.

We do not propose to discuss the unimportant variations and refinements in the views held as to etiology, pathology and nomenclature.

Prostatic enlargement becomes important only when it causes urinary obstruction. Otherwise it is practically symptomless and could be disregarded.

CLINICAL GROUPS

Three large clinical groups occur:

1. *Very slight enlargement* found in practically all men as early as the 40th year, perhaps giving rise to slight nocturnal frequency or slight difficulty in starting the stream but never going on to obstruction, varying for years or subsiding altogether, rarely causing even sufficient discomfort to bring the man to his physician and usually discovered by only those practitioners who make a routine of complete history-taking and of rectal examination, in their study of all abdominal cases. This group is within the normal limits of pre-senile changes. The removal of these prostates would be horribly unjustified. Their treatment is the hygiene of the third epoch of life.

2. *The small, hard or sclerotic prostate*, is not a frequent type but must always be born in mind. When present it causes exactly those symptoms of obstruction found with large prostates. They are densely adherent, are difficult and sometimes impossible to enucleate and are probably always a result of an antecedent infection. This type is not clearly separable from the so-called "atrophy of the prostate" or from the "bar at the neck of the bladder" as described by Guthrie.

This group demands operation but it is here that surgery is the least satisfactory.

In the presence of obstruction at the outlet of the bladder and the finding of a small, firm prostate by rectal examination, the most complete diagnosis by means of the cystoscope is indispensable to the proper selection of treatment. For most of the cases in this group the perineal operation is best suited. A few may be removed suprapubically with difficulty. The Young punch operation, the Bottini method of internal incision by cautery or the perineal or suprapubic incision of the vesical neck may be indicated. Some cases are extremely resistant to any form of treatment. It is not improper, seeing the difficulty this group presents, to suggest that the average general surgeon for his own happiness, as well as the welfare of the patient, pass these cases on to the genito-urinary specialist with very large experience with prostates.

3. *In this group are included the true large, soft and mixed types of prostates*, that type to which one's mind naturally turns under the use of the term "hypertrophy" and "enlargement."

This group constitutes the immense majority of all prostates coming for treatment. They are

both the simplest of diagnosis by the average practitioner and the most amenable to treatment by the average surgeon.

The enlargement varies from one to twelve ounces. Variability is characteristic. It may be symmetrical of all lobes; it may be irregular of all lobes; only one lobe may be involved or less than all lobes may be symmetrically or irregularly enlarged.

The majority of the enlargement may be toward the rectum but this is not usual. Nearly the entire enlargement may be into the bladder. This is common, but although rectal examination never discloses the full size of the tumor, sufficient enlargement is almost always palpable for general diagnosis.

The apex of the prostate is immovably fixed below and limited posteriorly and laterally by the triangular ligament and the fascia of Denonvillier respectively. Enlargement taking the line of least resistance passes upward and forward toward the bladder with a tendency to encircle the urethra. There is normally no prostatic tissue anterior to the urethra. At the vesical neck, the internal sphincter is either lifted ahead into the bladder or the enlarged lobes pass through this muscle and present beneath the vesical mucosa as one or more lobulated tumors, as a nipple-like obstruction or as a pedunculated outgrowth. More rarely does the bulk of the mass pass into the prostatic urethra.

With enlargement there occur certain definite but variable changes locally in the urethra, bladder and urine and secondarily but most important in the kidneys and in the general health.

The urethra is lengthened from the verumontanum to the vesical neck from one to three inches; it is distorted, compressed and deviated. The prostatic urethra shows an increase in the antero-posterior curve with the convexity forward. It may occasionally dilate to contain an ounce or more of urine and one may withdraw this wrongfully thinking that the catheter has passed into the bladder. Midline suburethral protrusion may give a Y-shaped proximal urethra. The internal urethral orifice is elevated above the floor of the bladder and is protruded into its cavity causing thereby the development of the post-prostatic pouch in which residual urine collects, the patient being unable to completely empty the bladder. This state constitutes the beginning of obstruction. With increase of obstruction there is increase in the size of the prostatic pouch and in the amount of residual urine. Ineffectual effort at expulsion produces muscular hypertrophy of the bladder wall and chronic distention later on causes atrophy and dilatation. Ammoniacal changes and infection take place in the residual urine. Stone formation occurs in approximately 20 per cent. of cases. Stones will usually be located in the prostatic pouch and may for a long time give no evidence of their presence. They are not infrequently within the prostate itself, may

be encysted within diverticula or there may be a somewhat diffuse lime salt encrustation of the bladder wall in the lower segment.

Venous engorgement is common within the enlarged gland, in the prostatic urethra and in the trigonal area. The large, soft prostates are very vascular. Acute exacerbations of this engorgement produce the hemorrhagic accidents of the disease and are frequently the cause of acute retention. Instrumentation is particularly apt to produce bleeding as well as damage to the unhealthy mucosa.

One should never forget the overflow of complete retention and be misled into the belief that the bladder is being properly emptied.

With marked cystitis, bladder thickening may occur giving rise to great intolerance and frequency. This is commonly associated with the small, hard variety and uncommonly so with the large, soft type of prostate.

The kidney changes are characterized by progressively increasing inefficiency from the first presence of residual urine. This is the least obvious and at the same time the most important item in the pathology of prostatic enlargement. Without a clear conception of this undisputed and frequently confirmed fact one cannot approach the treatment of this disease with a clear idea of what is indicated. Renal lesions vary from the earliest dysfunction to far advanced pyelonephritis.

Prostatics not uncommonly have polyuria. As this is not an essential part of the disease it is well to remember that it may persist after prostatectomy as the cause of nocturnal frequency with the passage of considerable quantity of urine at each act.

The general health is notably affected. Sleep is disturbed by the frequent getting up to void. Bladder irritation is harrassing, appetite is lessened, digestion is poor, there is usually early some loss of weight as result of the lowered nutrition and increasing with the progress of the disease. Mild attacks of sepsis or uremic states are added with physical and mental deterioration. Far advanced cases show the hopeless picture of cardio-renal insufficiency and toxemia plus the distressingly filthy features of the local condition.

Hernia, prolapsus recti and hemorrhoids are apt to occur from the violent straining in the efforts at urination.

SYMPTOMS AND DIAGNOSIS

Variability of symptoms is as characteristic as is variability of pathology. Certain well known features, however, will be found in all cases. Symptoms and signs are primarily those of obstruction—secondarily those of obstruction plus infection.

Careful history-taking is essential. One will find nocturnal frequency (diurnal frequency is present but is less noted by the patient), difficulty in starting and stopping the stream (dribbling), loss of force to the stream and hence loss of

normal parabolic curve. With developing cystitis there is frequency, pain, pyuria and the passage of small amounts of urine at each act. Hematuria is occasional. Acute retention may be the first symptom to seriously attract the attention of the patient to his malady but it more frequently comes on long after obstruction has made itself known by lesser symptoms. Chronic retention, distention with overflow, is its sequel and may be overlooked unless always sought for. Backache, a sense of perineal fullness and occasionally brief attacks of radiating pains into the thighs may be complained of but it is to be remarked how free from actual pains are these patients until the onset of cystitis, stone, and other complications.

Disturbances in the general health and other symptoms may vary remarkably in different individuals and in the same individual from time to time. Far advanced cases with cardio-renal break down present the classical symptoms of those states.

We have referred briefly to the diagnosis of small, hard prostates.

In the diagnosis of the large, soft and mixed types several very important items deserve emphasis.

(a) *Rectal Examination is Indispensable.* A general diagnosis can almost always be made by this one procedure. The information gained is augmented by having at the same time a curved metal catheter in the bladder so that the prostate and the posterior bladder region may be palpated between the intravesical instrument and the finger in the rectum.

(b) *Determination of Residual Urine.* This is actually the determination of retention complete or incomplete. It is carried out first by abdominal examination and secondly by catheterization. A distended bladder will be found by percussion and palpation above the symphysis. By catheterization, under strict asepsis, the amount of urine remaining in the bladder after the patient has voided all that he can—that is, the residual urine—may be measured and examined and the length and distortion of the urethra determined. If retention be present it may in all or in part be removed. It is unwise and sometimes fatally dangerous to suddenly empty a greatly distended bladder. The overcurved silver prostatic, the coudé or bicoudé, the ordinary soft rubber catheter and, at times, filiform catheters are to be used. Small, hard catheters are to be avoided. Force has no place in this procedure. These patients bleed easily, the urethral mucosa is easily damaged and urinary sepsis is apt to follow instrumentation of the gentlest sort. Mouillin states that he has more than once seen suppression of urine caused by the introduction of a catheter into the urethra and that tying in of a catheter must be regarded as a measure that should be adopted only when nothing else can be done.

(c) *Cystoscopy.* If the surgeon be confirmed towards performing the perineal operation in all cases, cystoscopy is indispensable.

If he operates on all but the small, hard prostates by the two-stage suprapubic route, cystoscopy is not only not indicated but is contraindicated as an unnecessary additional act of instrumentation.

Cases presenting the symptomatology of prostatic obstruction, but which do not show enlargement by rectal examination (such as may occur in rare isolated median lobe involvement), should have the additional diagnostic advantage of cystoscopy.

In the hands of a few experts cystoscopy may be of no harm. Even this is doubtful and no less an authority than Fenwick urges against its routine use. On the other hand the combined sounding, cystoscopic and catheterizing instrument, devised by Pilcher especially for use in prostatic work, does not bear all the objections of the ordinary cystoscope but the mere visual examination of the interior of the bladder prolongs the presence of a foreign body in the prostatic urethra, endangers the unhealthy mucosa, opens up possibility of further infection and, what is most important, gives no information which is not found during preliminary cystostomy or which will materially alter operative procedures.

(d) *X-ray Studies.* These are of great value in revealing the presence or absence of stone before operation. Stones may be encysted and neither seen by the cystoscope nor felt during cystostomy and, if previously located by X-ray would point to more complete search and removal. Stones actually within the prostatic tumor are not infrequent and may or may not be demonstrated but will of course be removed with the enlargement.

(e) *Determination of Renal Function.* This is a procedure which has gone far to establish the rationale of the two-stage operation. For routine use, however, it contains the elements of inaccuracy and thereby nullifies the very reason for its employment. If this be carried out at the time of diagnostic catheterization it means prolongation of the presence of an instrument in the urethra. The information gained is not vital as preliminary bladder drainage is done for the express purpose of relieving the poorly functioning kidneys which we know to be present. Why, then, submit our patients to the possibility, however slight, of injury in order to arrive at an inexact measure of disability? If dysfunction be extreme it shows clinically and the estimation of it by other means is all the more contraindicated and useless.

DIFFERENT DIAGNOSIS

This must be made from tuberculosis, cancer, syphilis and chronic inflammatory disease of the prostate; from stricture; from tumors of and

stone in the bladder and from diseases of the central nervous system with bladder symptoms. In the majority of cases it is simple and rests upon careful history taking, complete general examination and brief, non-meddlesome local examination. Cardinal points are well known. Certain facts deserve emphasis.

Symptoms of obstruction in the region of the prostate may be caused by things other than the prostate. A diagnosis is never to be made on symptoms alone.

Large, soft prostates are more frequently found in men past 60 years of age, fibroid and mixed prostates more commonly before that age.

Prostatic obstruction rarely produces symptoms before 50 years of age. Symptoms of stricture are rare after 50 and common before 40.

The symptomatology of early cancer of the prostate is identical with that of early benign hypertrophy. Pain alone is more common and persistent and is felt in the bladder, penile, perineal, sacral and thigh regions. Hemorrhage, contrary to the belief of many, is much less common in cancer than in simple hypertrophy, particularly middle lobe obstruction, vesical calculus or intravesical tumor.

Every prostate revealing to the finger in the rectum an area however limited, of stony hardness, must be considered malignant. Subtrigonal induration is particularly significant. Many enlarged prostates, variously estimated at from 5 to 10 per cent., show cancer after removal and only upon microscopic study and without pre-operative sign or symptom to denote its presence. Fortunately a very high percentage of these show no post-operative recurrence.

Stone in the bladder is frequently caused by prostatic obstruction; on the other hand prostatic obstruction is occasionally relieved by removal of a stone which, developing over a long period of time, has caused prostatic irritation and engorgement.

TREATMENT

The treatment of obstruction by prostatic enlargement is *first* the relief of the effects of the obstruction and *second* the removal of the obstruction.

A certain number of patients refuse operation. To them remains the catheter life, unhappy as is its outlook. Squier studied a series of patients with obstruction and retention and found that 50 per cent. without catheterization died in five years; that catheterization shortened this expectation 5 per cent.; that 14 out of 17 patients died within 2 years and 1 months after taking up catheter life.

For the large group of patients who do heed the advice of the family physician or surgeon, there is incumbent on these latter a knowledge of the most recent status of the operative treatment of this condition, the very high percentage of functional return, the reduced morbidity and

the potentially lower mortality with earlier operative interference.

Any man suffering from prostatic obstruction, without other condition contraindicating operation, who is required to commence catheter life, should certainly have a prostatectomy performed.

Many suffering from low grade obstruction with a fair amount of residual urine, who have not as yet had acute retention, should have the prostate removed.

Cases showing moderate prostatism and already on catheter life should have the obstruction removed.

Age, as measured by years, is no contra-indication. Age, as measured clinically by far advanced general breakdown, may be a very definite contra-indication to operation. These far advanced cases require the greatest nicety of judgment; some will be best continued on catheter life; some will best be given the benefit of permanent suprapubic drainage and of these a few will sometimes so surprisingly recuperate as to allow of subsequent prostatectomy.

The treatment of the most common acute accident of prostatic obstruction, namely acute retention, will not be gone into. However at the risk of repetition we would urge the minimum of, and extreme cleanliness in instrumentation and this only after hot baths and morphine have proved ineffectual.

TYPE OF OPERATION

The vast majority of operable cases should have the two-stage suprapubic (transvesical) operation. This constitutes the most important advance in the surgery of the prostate.

The first stage of this procedure is, briefly, to give rest and drainage to the bladder and, by relief of back pressure and infection, to give rest and drainage to the kidneys. Rest and drainage are basic principles as old as man. *The first surgical problem of this disease is the relief of the damaged renal function and to gain improvement in the general health and it is not to get out the obstructing prostate.* This cannot be too greatly or too frequently emphasized. Bladder drainage by preliminary cystostomy is life saving. It brings the patient in from 7 to 14 days, or longer, up to a much greater resisting power and over the treacherous second phase developing about the 3rd post-operative day and persisting to about the 7th. Cabot and Crabtree ably demonstrated the mechanism of this relief. It is definite in all prostatism but more intense in the overdistended cases. Most patients dying under the one-stage prostatectomy do so in this period found from the 3rd to the 7th day. Pilcher studied and described the phenomena of this phase after cystostomy alone, and without the added shock and hemorrhage of prostatectomy, and noted regularly *fall in blood pressure, marked reduction in urinary output, great increase in albuminuria and marked reduction in the phtha-*

lein estimation of renal function. This is followed by a third phase, beginning about the 7th day and continuing to the 10th or 14th day and characterized by *increase in urinary output, increase in renal function, further decrease in blood pressure and albuminuria*—a state infinitely improved for the prostatectomy.

Many operators substitute for cystostomy permanent or frequent catheterization for several days before a one-stage prostatectomy. This entails, however, urethral instrumentation, may add a urethritis, or an epididymitis to the case, is not so positive or thorough as cystostomy and would seem to be the least efficacious of the two methods although a tremendous improvement over the one-stage prostatectomy without any preliminary preparation.

Clinically the third phase, the time proper for prostatectomy, is determined by the patient having a clean, moist tongue, improved appetite and normal sleep, normal temperature, pulse and respiration and an improved less toxic and less fatigued appearance which is quite definite. The 2nd stage of the operation then is performed usually in the 2nd week, sometimes in the 3rd.

TECHNICAL POINTS

The technique of the two-stage operation has been often described. We desire to emphasize certain points only.

1. *Simplicity.* The many elaborate devices, catheters, tubes and graded steps of the cystostomy are not necessary. The patient will be kept dry during the drainage period if only a large rubber tube, $\frac{1}{2}$ inch inside diameter, be purse stringed into an opening high in the bladder wall and well away from the region of the internal meatus and if the tubing be sufficiently long to reach a sterile container at the bedside without the interposition of glass connecting or other tubes.

No urethral drainage should be used at any time. It is unnecessary, it is not clean, it almost invariably excites urethritis and it is almost the exclusive cause of post-operative epididymitis.

After the 2nd stage the least catheter passing and the least bladder irrigation the better. A large rubber tube is again used for drainage for from three to five days during which time the patient will be kept fairly dry. After removal of the drainage tube the urine is collected on frequently changed suprapubic pads until wound closure. These patients tolerate being wet remarkably well.

If all of the prostate has been removed the danger of severe post-operative hemorrhage is very slight. Generally speaking, no packing by gauze, special bag or catheter or by other means should be used to exert pressure against the prostatic bed. To directly suture the margins of the vesical mucosa or ligate bleeding points, too much traction is required on the bladder walls to war-

rant the small advantage gained. For the same reason Freyer's method of enucleation by touch of the intravesical finger is to be preferred to the enucleation by direct vision.

2. *Anesthetic.* Ether or nitrous-oxide is to be preferred for both stages. Local anesthesia may at times seem preferable for the first stage but as a routine for the entire operation has many disadvantages in the hands of the average surgeon.

3. *Thoroughness.* In the first stage rapid, complete exploration of the interior of the bladder is to be made, stones removed, size and shape of the prostate determined and other important pathology sought for. Probably the most important detail is to avoid leaving a vesical calculus behind.

In the 2nd stage see that all of the prostatic mass is removed. This insures against hemorrhage and post-operative recurrence of urinary difficulty.

4. *Attention to General Condition.* Throughout these patients are to be considered toxic. Elimination is to be maintained by bowel. The nitrogen content of the diet is to be reduced. Fluids are judiciously increased. The patients are to be gotten out of bed early after each stage and exercised in the fresh air, but always short of fatigue. Supportive medication may be indicated.

5. *Closure of the Suprapubic Wound.* There should be no haste to produce this closure. The longer the suprapubic drainage persists, the longer as a general thing it is required and the steadier the improvement of the patient. To obtain quick closure in all cases would certainly defeat the object of the operation. The average closure is from 15 to 40 days. Patients may safely leave the hospital a considerable time before closure takes place.

6. *Return of Function.* Well over 90 per cent. of all cases have extremely satisfactory return of normal micturition. A large number retain such sexual vigor as they may have had before operation. Sterility is, however, produced in most cases notwithstanding the claim of many operators to the contrary. This function is not of great importance at the age most cases come to operation. Nocturnal frequency may persist to some extent after operation owing to a coincident interstitial nephritis.

7. *Sequellae.* Urethral stricture, incontinence and persistent suprapubic fistulae are so rare as to bear no relation in the selection of operative interference in a given case. They are to be born in mind by the operator both during and after prostatectomy.

8. *Mortality Rate.* This varies from 5 to 15 per cent. It is directly proportionate to the number of far advanced cases coming to operation.

CONCLUSIONS

In the 80's and 90's the mortality rate of oper-

ations for appendicitis was in reality the mortality rate of general peritonitis and consequently very high. With increasing knowledge and operations earlier in the course of the disease, while its manifestations were localized, the mortality rate has become almost negligible. Granting an average surgical ability, the mortality rate depended upon the period of the development of the disease and not upon the operator.

There is an almost exact parallel today in the treatment of benign enlargement of the prostate excepting that the profession has not as yet accepted the dictum of "remove the obstruction" as freely as it has "appendicitis-operate!" If the obstructing prostate were removed at the time the obstruction commences, while the condition was still local and long before cystitis, ascending renal infection and renal insufficiency had undermined and reduced the patient's general health to one of poor operative risk, the mortality rate would fall profoundly from its present low rate of 5 to 15 per cent. and the personal equation of the average general surgeon versus that of the specialistic prostatectomist would become more and more unimportant.

Diabetic Foods.—A report from the Connecticut Agricultural Experiment Station on diabetic foods includes not only the content of carbohydrate in these products but also that of protein and fat in view of the recognized necessity of taking into account all of the nutrients in any proper formulation of regimen for the diabetic patient. There is no satisfactory definition of what a diabetic food is, nor is there any universal diabetic food. The value of accurate information regarding the makeup of such products as may find special application in the dietotherapy, such as given in the Connecticut report, lies in the fact that it enables clinicians and the patient to proceed intelligently in the direction of diet planning with a view to tolerance of all the nutrients. Of particular interest in the report are the analyses of bran, which is being wisely used at present to give bulk to the food residues in the alimentary canal. It appears that common, unwashed bran frequently contains no more than half as much starch as some of the advertised brands of "health" bran. (Jour. A. M. A., Sept. 18, 1920, p. 818).

Books Received

American Red Cross Work Among the French People, by Fisher Ames, Jr. This volume deals with work during the war period and the months immediately following, and does not attempt to take up post-war activities in detail. The Macmillan Company, New York.

Optimistic Medicine, of The Early Treatment of Simple Problems rather than the Late Treatment of Serious Problems. By a former insurance man. The F. A. Davis Company, Publishers, Philadelphia, Pa. Price \$3.00 net.

The Anti-diuretic Effect of Pituitary Extract in Diabetes Insipidus: With Report of a Case

Gilbert Micklethwaite, M. D., Portsmouth

Editor's Note.—Ordinarily pituitrin acts as a marked diuretic and is used to advantage in such conditions as uremia, anuria and dropsy. Paradoxically diabetes insipidus is most satisfactorily controlled by injections of this principle. Barker considers the condition a multiglandular endocrinopathy and it is still a question as to whether the extract of the infundibulum or the whole pituitary gland, alone or in combination with other endocrines is the most efficient therapeutic remedy. Cases of diabetes insipidus are so rare that only infrequent clinical studies can be made, hence the interest that attaches to the case report of Dr. Micklethwaite from his own experience and that quoted from the records of Davidson.

CASE 1.—R. M., aged 30 years, white, male. Complaint: belching of gas, discomfort after eating and drinking large quantities of water.

Family history: negative with the exception of one paternal uncle and two brothers who drink large quantities of water.

Past history: childhood diseases, measles, mumps, typhoid fever without serious complications and pneumonia.

Present illness: for several years the patient has been annoyed by stomach trouble, especially belching and discomfort after eating. He states that he has been drinking large quantities of water for years. He has lost no weight and does not have an abnormal appetite.

Physical examination: reviewing all systems they were found to be negative. **Temperature** 98°, **pulse** 72, regular in rate, force and rhythm, no extra systoles. The **skin** was dry and scaly to the touch. **Eyes** reacted to light and accommodation and the eye grounds were negative. The **teeth** were in good condition and the tonsils were neither enlarged nor ragged. **Heart:** no increased dullness, all sounds clear and distinct. **P. 2** equals **A. 2**. **Lungs:** a few râles at the left base of no significance. **Abdomen:** bladder area on percussion reached to the umbilicus but there was no tenderness on palpation and no masses. **Reflexes:** equal and active on both sides. **Kernig** and **Babinski** signs negative. **Extremities:** no edema.

Laboratory findings: urine passed at one time, amount—900 cc., color—pale, specific gravity—1002, reaction—acid, albumin, sugar, acetone and diacetic acid—negative, microscopic examination—negative.

Stomach contents: two retention meals, rice—3 ounces, raisins—1 ounce, no retention. **Test meal:** one glass of water, one shredded wheat biscuit, free HCl—45 per cent., combined acid—25 per cent., total—70 per cent.

Stool examination on meat free diet for occult blood: benzidine—negative, aloin—negative, no fats or undigested food particles. Chlorides, (Bayne-Jones method) .25 per 100 cc., 10 grams per 24 hours.

Renal function: 35 per cent. first hour, 20 per cent. second hour. Two hour test specific gravity did not vary over 1002.

Both the X-ray examination and the Wassermann test were negative.

Treatment: one ampoule of pituitrin, (S) Parke, Davis & Co., was given hypodermically both morning and evening. Toward the end of the week the patient's arm became rather swollen but was relieved by the application of hot water.

Comment: during the course of treatment the patient's urine rose in specific gravity to a maximum of 1012 and varied in quantities from 1½ to 2 liters. It changed from a pale straw to a lemon color. The chlorides rose to a normal of .59 per 100 cc., or nearly so. The free HCl in the gastric juice went down to 25 per cent., thus leaving the presumption that the acidity was due in a large measure to the retained chlorides. The patient's skin became moist and velvety. The X-ray examination and Wassermann test were made to rule out syphilis and tumor.

DISCUSSION

The difficulty with this line of treatment is that the effect is not lasting and that two injections daily are necessary to keep down the quantity of the urine and to raise the specific gravity. The practical application is at once manifested in life insurance and other diagnostic examinations.

The control of diabetes insipidus by the use of pituitary extract has been dealt with recently by L. F. Barker, Mary Hodge and H. O. Mosenthal in rather exhaustive papers. Davidson refers to some interesting observations by Kennaway and Mottram upon the anti-diuretic effects of pituitary extract in diabetes insipidus, with a detailed account of two cases, and in view of the comparative rarity of this condition he records the following notes of a case under his own care in which injections of pituitrin were given and observations made upon the total output of urine in the 24 hours, as well as notes on the amount and specific gravity of the samples collected at frequent intervals after the injections.

The injections were always followed by an

action on the bowels and on the first occasion by vomiting, but except for this no untoward effects were observed. Apart from the discomfort and annoyance of the symptoms the patient suffered no inconvenience beyond that of a slight bronchitis, which yielded to treatment. There were no symptoms or signs to suggest any associated disorder of the pituitary gland.

CASE 2.—The patient, an ex-soldier, age 35, was admitted to the wards of the hospital on May 21, 1920. He had always been a healthy man until he was invalided from the Salonika front in the winter of 1917 with bronchitis and nephritis. He was sent back to England, and while in the hospital at Malta, en route, he began to complain of polyuria for the first time. He was treated for bronchitis and asthma, but no special attention was paid to the other condition.

On admission to the hospital his condition was as follows: He was a healthy looking, well-developed man. He complained of some cough and of great thirst, and continued polyuria. On examination he had signs of some bronchitis; medium rhonchi were audible all over both lungs without moist sounds; there was a moderate amount of expectoration. He was treated for this with belladonna and stramonium, and the physical signs in the chest cleared up. The heart was normal. There was no sign of edema of the face or legs, nor was there any albuminuria. His visual fields were not diminished; the appearance of the fundus oculi on both sides was normal. A skiagram of the skull showed no abnormality of the sella turcica. From the time

of admission he suffered continually from intense thirst, and was allowed as much water as he wanted day and night. The urine was pale, acid in reaction, of low specific gravity (1000), and contained no sugar or albumin. The amount passed per twenty-four hours averaged just over 300 ounces.

It was decided to administer hypodermic injections of pituitary extract in order to observe its effect upon the diuresis, and to see whether after continuing the injections for some time any permanent or lasting effect was obtained. The anti-diuretic effect of the pituitrin was such as to cause an appreciable diminution in the total excretion of urine in the twenty-four hours. The effect was much more pronounced during the period shortly following the injections.

After June 3 (thirteenth day after admission) several doses of pituitrin were given by the mouth, but without any appreciable effect upon the amount of urine secreted. The polyuria continued, the man's general condition being satisfactory and the bronchitis and asthma having completely cleared up. He was discharged from the hospital in order to go for a short time into a convalescent home.

REFERENCES

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L. F. Barker and H. C. Mosenthal: The Control of the Symptoms of Diabetes Insipidus by the Subcutaneous Injections of Extracts of the Hypophysis Cerebri. *Journal of Urology*, October, 1917, p. 449.
Davidson: *Lancet*, August 21, 1920.
Kennaway and Mottram: *Quarterly Journal of Medicine*, April, 1919.

OHIO PUBLIC HEALTH NOTES

—Parents and teachers of Lima school children held joint meetings in the various schools of the city recently for discussion of health problems. Physicians addressed each meeting on the importance of physical examinations to determine the nature of childhood ailments.

—County coroners from various parts of the state appeared before the County Affairs Committee of the House of Representatives, February 23, to urge passage of a bill enlarging the scope of the coroner's duties and jurisdiction. One of the provisions of the bill would give the coroner charge of the morgue, now under custody of the county commissioners.

—Miss Mary Foster assumed her duties as Coshocton County public health nurse, April 1. Miss Foster is employed at an annual salary of \$1,400.

—Ross County board of health has given a

unanimous vote of thanks to Ross County Medical Society for its cooperation and help in the physical and health examination of food-handlers conducted in January. It is said not more than five of 143 employes of restaurants and dining rooms examined failed to pass examination.

—Dr. J. M. Scott of Scio has been elected health commissioner for Harrison County on a part-time basis. He succeeds Dr. S. B. McGavran, who resigned because of ill health and has been made an honorary member of the county health board in recognition of his efficient service as health commissioner.

—Delphos city council recently refused to pay \$4,000 to the board of health for debts contracted by the board, giving as a reason that two members were appointed to the board without ratification by council and that their selection is not valid.

—Free mental clinics are being conducted by the medical staff of Toledo State Hospital each week in the quarters of the Toledo District Nurse Association, for the purpose of aiding in the re-establishment of paroled and discharged patients in their respective homes and communities.

—Declaring that his work as Canton city physician has been increased approximately 400 per

cent. under existing industrial conditions, Dr. E. O. Peterson recently requested the appointment of an assistant and Dr. J. A. Rhiel was named to the position. Dr. Rhiel's appointment is temporary. He was located at Malvern until 1917, when he entered military service.

—At a meeting of the Union county health board, March 1, Dr. Carl W. Hoopes of Marysville was employed as health commissioner for two years at a salary of \$3,000 per year, putting in nine-tenths of his time each year. Miss Roxanne Trusler was reemployed as public health nurse for Marysville and vicinity and Miss Laura Hinderer nurse for Richwood and vicinity, each at a salary of \$1,200 per year.

—Under a new health code formulated for Camp Sherman, Major R. C. Hefebower, camp surgeon, is the health commissioner of the camp and the camp sanitary officer is second-in-command. They will keep in touch and cooperate with Dr. G. E. Robbins, Chillicothe and Ross County Health commissioner, at all times.

—Two thousand Youngstown school children were recently vaccinated in a campaign under the supervision of Dr. C. B. Lewis, director of physical education of the local schools. The campaign was conducted in the same manner as that of the first school term, when approximately 5,000 pupils were vaccinated, none of whom have contracted smallpox.

—Tuscarawas County's 1921 health budget has been reduced from \$12,750 to \$5,300. Among items affected was the salary of Dr. E. V. Berry, health commissioner, which was cut from \$3,000 to \$2,000 per year.

Smallpox Cases Reach High Total

Ohio continues to maintain her unenviable record for high smallpox prevalence, according to February case reports to the State Department of Health. The total for the month was 1,011.

Reported case totals for previous months are: October 477, November 921, December 1,211, January 1,421. Early reports in March indicated continued high prevalence of the disease.

Smallpox is widespread over the state, but especially notable centers of the past two months include: Akron, Columbus, Toledo, Washington C. H., Middletown, Delphos, Ashtabula, Lima and the rural sections of Logan and Guernsey counties. Lack of general vaccination of the public is blamed by health authorities for the continued spread of the disease.

In several cities, including Columbus, stringent vaccination orders applying to school children have been issued by school and health authorities in the effort to check the increase of the disease.

The past winter's smallpox record indicates the largest total of cases since the epidemic of

1917-18, which was the worst epidemic of the disease appearing in the morbidity reports of the State Department of Health. During the fall and early winter of 1920 the monthly case totals were higher than those of 1917, but in January the curve dropped below that of the 1917-18 outbreak.

The total of reported smallpox cases in 1920 was 6,288, as compared with 4,107 in 1919, 10,389 in 1918 and 5,251 in 1917.

Two Successful Tuberculosis Clinics

Physicians in Hamilton and Portage Counties showed interest last month in the tuberculosis clinics conducted in their territories by the State Department of Health, the Ohio State Sanatorium and the Ohio Public Health Association. Twelve physicians visited the Portage County clinics and 15 attended those in Hamilton County, besides several others who sent patients to the clinics.

The purpose of the clinics is two fold—to give physicians up-to-date clinical training in the diagnosis of incipient tuberculosis and to educate the public in regard to the disease, particularly from the standpoint of early diagnosis.

Of 191 persons examined in Hamilton County, 29 were classed as positive cases, two as arrested cases, 15 as suspicious and 145 as negative. In Portage County, where 245 were examined, the findings were: positive 28, negative 107, advanced 7, moderately advanced 6, suspicious 73.

Dr. F. C. Anderson, superintendent of the State Sanatorium, is directing the diagnostic work in the clinics. He was present in person at the Hamilton County clinics, the first of the series, while Dr. C. H. Benson of Columbus conducted the Portage clinics for the State Department of Health. Other clinics are planned, to be held during a period of several months. Scarcity of personnel is hampering the cooperating organizations in pushing forward the program, but arrangements are being made to adjust this.

Opposition to H. I.

Dr. Walter R. Griess of Cincinnati, speaking before the Health and Accident Underwriters' Conference in that city recently, took a substantial rap at the health insurance and state medicine idea. He declared that health insurance would be simply another burden for the already over-loaded taxpayers and state medicine would be only a calamity for patients and physicians alike. Adoption of state medicine, he contended, would signify a falling in with the trend of vicious socialistic legislation, called for and wanted only by a small group in which is included "misinformed uplifters."

List of Columbus Hotels and Rates for Your Convenience in Making State Meeting Reservations

ANTICIPATING a very heavy registration at the State Meeting in Columbus on Tuesday, Wednesday and Thursday, May 3, 4 and 5, the committee on arrangements for the meeting urges those expecting to attend to make their hotel reservations as early as possible. As a guide in this matter a compilation of the leading and most centrally located Columbus hotels, their locations, capacities and standard rates, has been prepared and is presented in the table below. Assurance is given that requests for reservations will receive prompt attention and the rates quoted will be adhered to. In making reservations communications should be addressed directly to the hotels.

Name of Hotel	No. Rooms	No. Beds	No. Can Accomodate	Minim.—Maxim. Rates Single Rooms	Minim.—Maxim. Rates Double Rooms
CHITTENDEN Spring and High Sts.	252	275	500	2.00 — 4.00	4.00 — 6.00
NEIL S. High St. (opposite State Capitol)	150	235	250	2.00 — 5.00	5.00 — 6.00
SOUTHERN High and Main Sts.	250	390	425	2.00 — 3.00	3.50 — 6.00
COLUMBUS Fifth and Long Sts.	190	190	350	\$1.50 — \$3.00	\$2.50 — \$6.00
HARTMAN Fourth and Main Sts.	106	150	250	2.00 — 7.00	3.00 — 10.00
VIRGINIA Third and Gay Sts.	125	145	160	1.50 — 3.00	2.50 — 6.00
STAR 227 N. High St.	150	300	400	1.00 — 3.00	2.00 — 5.00
SENECA Broad and Grant Ave.	160	37	37	3.00 — 5.00	4.00 — 8.00
NORWICH State and Fourth Sts.	100	150	180	2.00 — 3.00	4.00 — 6.00
DAVIDSON High and Naghten Sts.	76	76	150	1.00 — 1.25	2.00 — 2.50
JEFFERSON 17 E. Spring St.	86	112	225	1.50 — 3.00	3.00 — 6.00

The Legislative Whirl Reached Maximum Velocity During March

Just before these pages were closed on March 21, the legislature was moving with record velocity, having rushed the administrative reorganization code (H. B. No. 249) through the House a few days previously by a strictly party vote of 107 to 11, with the adoption of the emergency clause by a vote of 100 to 18. Practically all functions of state government are rearranged and modified under civil departments.

Amendments were inserted by the committee before it was reported out, eliminating the "Department of Examinations" and in the language of the bill stating in respect to the State Medical Board and other professional licensing boards that "Such boards and their officers shall continue to exercise their functions as heretofore." The bill, however, provides that there shall be a chief of the "Division of Licensing" in the department of education, the duty of the director of which shall be to recommend methods of determining standards of professional colleges, conducting hearings and examinations, and enforcing laws, and that the various licensing boards may delegate to this bureau of examination and licensing various duties with respect to such matters.

More concessions in amendments to the reorganization code were secured on behalf of the various professions than any other group secured under any other departments.

On account of the indefinite and conflicting provisions in some sections of the code as it was passed in the House relative to the licensing boards and their relation to the division of examinations in the department of education, amendments were prepared for submission to the Senate clarifying these sections. No particular opposition was anticipated in having these accepted.

The Council and the Policy Committee of the State Association considered this the most important issue in a legislative way, with which the medical profession has been confronted in recent years.

With the exception of the administrative reorganization code, no other proposed legislation has been the subject of so much controversy as House Bill No. 47, which would include occupational diseases under the benefits of the Workmen's Compensation Law. With the administration and the legislature pledged to the enactment of some provision on this subject, it appeared probable that some law will be passed; however, the committee to which the original bill was referred changed the entire provisions of the proposal four different times. Your committee is particularly interested in making the provisions of the bill definite in order to later avoid controversies in its administration.

This bill was placed on the calendar late in

March with a likelihood of its being enacted by April 1.

On account of the bitter feeling aroused by the numerous conflicting school bills, and the disposition on the part of a large number of the representatives to reject any measure which would increase the discretionary powers of the state department of public instruction, House Bill No. 133 to provide for physical education in the school of Ohio was defeated for the second time on reconsideration by seven votes.

The principle of the bill was meritorious, it having been drafted by the special physical education committee of the State Medical Association in conjunction with other interested groups, but in view of the attitude of the legislators on this general subject, it was not thought wise to endanger a general policy program to insist on demands for the enactment of this law.

The culmination of the last desperate effort of the chiropractors was brought to light late on March 17 in the introduction in the Senate of a new chiropractic bill, Senate Bill No. 185, introduced by Senator Endley of Mansfield. This bill is just as unwise and pernicious as the initiated bill which was killed in the House of Representatives through "indefinite postponement," as it would provide for a licensing board of three members with entire power to evaluate the credits of those seeking examination and in spite of the fact that the regulations stipulated in the new proposal are similar to the present requirements under the State Medical Board, no chiropractor has yet tried to qualify under the present reasonable regulations. The answer is obvious. They haven't the qualifications.

The Christian Science bill—House Bill No. 192, had been reported out of committee "without recommendations." Christian Science members of the House threatened to hold up worthy legislation on other matters through parliamentary maneuvers unless their bill was reported out of committee. They also have made alliances with the chiropractors and all other radicals in the legislature.

The insincere attitude of this Christian Science proposal is obvious as it not only would recognize on the part of the state this religious sect as distinct from all others, but it contains a serious health menace in that Christian Science "healers" who know nothing of disease or infection, and who even disavow their existence, would be exempted from any regulations and would be protected from any serious results through their attempt to treat all ailments through prayer alone.

Into the maelstrom of pending issues was introduced late in March, Senate Bill No. 184,

by Senator Kumler, to repeal Section 1286-2 of the General Code, which permits registered nurses under the direction of a physician or dentist to administer anesthetics. This is the one issue on which there is a wide difference of opinion among members of the profession, although the proponents of Senate Bill No. 184 secured considerable support for this bill among legislators and expressed confidence in its enactment.

Senate Bill No. 57, (Chatfield, of Cincinnati), to correct the errors in the present law relative to fees and costs in lunacy cases, and provide for the proper payment of fees to physicians in such cases, was on the calendar in the Senate. This bill which is a purely corrective measure, intended to overcome unintentional defects in the present law, should be enacted. Please insist that your senator vote "yes" on Senate Bill No. 57, as hasty action is necessary so that it may be enacted before adjournment.

Just before this *Journal* went to press, there was a close fight on Senate Bill No. 137 to limit to \$1,500 a year the annual salary of health commissioners in counties of 20,000 population or less. The policy committee and those interested in retaining the beneficial provisions of the Hughes-Griswold health code were successful in having eliminated from the bill, provision to limit to \$2,500 the salaries of health commissioners in counties between 20,000 and 40,000 population. Previously another bill had been tabled in the Senate (Senate Bill No. 92) with practically the same provisions. There are ten counties in Ohio which would be affected if Senate Bill No. 137 were enacted and in which it would be impossible to secure adequate health administration even though the need might be realized at some later time.

The proponents of the Archer bill had the support of public sentiment in several of the extremely small counties where the administration of the present law has been unsatisfactory. The principle involved, however, as a general proposition is unwise for it may be considered a precedent in case the proposal should become a law for the later limiting of health administration activities in still other counties where there has been no opposition to the methods of administration.

On account of the change from day to day on numerous legislative issues in which the medical profession is directly interested, and in view of the fact no outstanding issues of special importance have so far been passed by both branches of the General Assembly which require analysis of their provisions as affecting medical practice, the status of many other pending bills is not reproduced. The auxiliary legislative committeeman in each county society is kept constantly informed on these matters through frequent bulletins from the office of the Executive Secretary,

and through the committeemen, the membership may be constantly informed.

Automobile Accident Prevention

A novel contribution to the current discussion of how to lessen automobile accidents has been offered by a New York physician. It is to employ the power of repeated suggestion in an effort to make the public more careful. Basing his idea on fifteen years' observation which led him to conclude that 10 per cent. of such accidents may be laid at the door of the automobile driver and that the rest are due to lack of concentration on the part of the pedestrian, the doctor would have every newspaper print conspicuously on the front page daily, "Before you cross the street today look carefully to right and left." He would have the same warning flashed on motion picture screens and posted up in all the schools and public buildings and displayed on every third lamp post. Within a few days, he believes, every person who is not blind or illiterate would involuntarily look to right and left before crossing a street. He would do so because he could not help it; it would have become a habit.

Small Advertisements

For Sale—Physician's property and location. Will sell at sacrifice my property consisting of ten-room house, including two office rooms, wash room, coal house adjoining; in good condition, newly painted. Barn, garage and corn crib combined, chicken house, fruit trees of all kinds, almost an acre of land, well fenced with eight foot wire. Located on cross street in town of 200 population; large territory, excellent people, good pay. Good roads. Best location in Warren County for one physician. Full particulars on request. Dr. L. G. Brock, Waynesville, Ohio.

For Sale—Or will exchange locations. \$5,000 home, 10 rooms, two office rooms, electricity, gas, furnace, barn, cement walks; located in railroad town of 400 population, 30 miles from Dayton, excellent pikes, churches, schools, bank, farms; in tobacco country. Practice \$4,000, one competitor. Address W., care *The Journal*.

For Sale—Fine property and well established practice on easy terms; town 1,000, northern part of state; taking post-graduate work. For information address E. C., care *The Journal*.

For Sale—Partnership or locum tenens, an \$8,000 cash office practice for five months, beginning April 1. Address D. P., care *The Journal*.

Wanted to Buy—Office and residence, together. Centrally located. Will pay \$4,000 to \$8,000 in town of 5,000 to 2,500 population. Address P. M., care *The Journal*.

Wanted—Microtome, Minot automatic or equivalent, in good condition, preferably with knife and accessories. Give full description and price desired. Address L. F., care *The Journal*.

Wanted—Internes at Jewish Hospital, Cincinnati, Ohio; July 1921 to July 1922. 140 bed hospital—large clinic service. \$25.00 a month; room, board and laundry. Add. Superintendent.

Stolen, March 3, a Spencer model 10 microscope number 23719. Spencer 16 mm. objective number 85118. Spencer 4 mm objective number 85086. Leitz 1/12 oil immersion number unknown. Reward. John H. Hare, M.D., Evansville, Ind.

ACADEMIES AND COUNTY SOCIETIES

Cleveland

(Lester Taylor, M.D., Secretary)

The One Hundred Sixty-Eighth regular meeting of the Academy of Medicine of Cleveland was held February 18.

The first paper was presented by Dr. H. J. Gerstenberger on "The Importance of the Fluoroscope in Diagnosis of Enlarged Thymus." Dr. Gerstenberger cited some recent experiences with the X-ray plate diagnosis of enlarged thymus and showed that the plate method must be checked up by the fluoroscope in making the diagnosis, as the shadow varied greatly with respiration. The talk was illustrated by slides and specimens. The discussion was opened by Dr. W. McKim Marriott and continued by Dr. Todd.

Dr. Gerstenberger then introduced the guest of the evening, Dr. W. McKim Marriott of Washington University School of Medicine, St. Louis, who spoke on "The Problems of Infant Nutrition." He discussed mainly two types, the severe summer diarrhea of infants caused by the infections in the upper intestine tract, in which the main symptoms were due to the enormous loss of water. He advocated replacing the water loss by intraperitoneal injections of a modified Ringer's solution. The second problem—of the marasmic or atreptic infants, where the chief need was for high caloric feeding, especially carbo-hydrates. He advised giving the carbo-hydrates intravenously. The discussion was opened by Dr. Gerstenberger and further participated in by Drs. J. J. Thomas and Stewart. Discussion closed by Dr. Marriott.

On motion of Dr. J. J. Thomas the amendments to the constitution and by-laws, as approved and accepted at the last meeting of the Council, were passed by the Academy of Medicine. Attendance 102.

The regular meeting of the Council of the Academy of Medicine of Cleveland was held March 8. The following members were present: the president, Dr. Wm. B. Chamberlin; Drs. Berkes, Birge, Brookhart, Cole, Lenhart, Sanford, Skeel, Sloan, Taylor, Thomas, R. K. Updegraff, Webster. Six physicians were elected to membership, and the applications of nine were ordered published.

On motion, Drs. Cole, Berkes and Birge, were appointed to a committee to act in conjunction with the President of the Academy to select delegates and alternates for the State Convention at Columbus in May.

The names of men who had been dropped for non-payment of dues were assigned to various members of the Council for personal interview.

A communication from the American Legion

requesting records from the doctors of Cleveland on all disabled service men under their care, was read. The Council heartily endorsed the action of the Legion in endeavoring to secure compensation for the wounded veterans. The request was ordered published in the Bulletin and notice sent to all of the members of the Academy.

A communication from the Community Betterment Council in regard to the endorsement of the proposed Clean-Up Week was presented. The communication was referred to the Public Health Committee and the official endorsement of the proposed plan was approved by the Council. The secretary was authorized to acknowledge receipt of this communication and endeavor to give it proper publicity in the press.

The president reported that no reply had been received from his request to the American Medical Association to hold their annual meeting here in 1924.

On request of Dr. Thomas, the motion appointing seven members from the Academy on the Milk Commission was reconsidered, and it was moved that the milk commission should consist of five members from the Academy of Medicine and two from the Homeopathic Society.

Dr. Sanford, chairman of the Legislative Committee, requested that the names of Drs. Brigman and Lowry be added to his committee.

David Marine, M.D. of New York, was elected an honorary member of the Academy.

Toledo and Lucas County

(J. F. Wright, M.D., Secretary)

Dr. Frederick M. Allen of New York was the principal speaker at a meeting of the Toledo Academy, March 4. Dr. Allen is the originator of the Allen method of the treatment of diabetes.

County Societies

SECOND DISTRICT

Darke County Medical Society held a well attended and interesting meeting in Greenville, March 10, when the essayists were Drs. W. D. Inglis, C. W. McGavran and E. Scott of Columbus. Dr. Inglis' talk on "Mal-positions in Obstetrical Practice" was practical and thoroughly enjoyed by all present. Dr. McGavran showed some interesting specimens of cardio-vascular lues.—B. F. Metcalfe, Correspondent.

Greene County Medical Society held its regular monthly meeting in Xenia, March 3, with 19 members present. In the brief business session which preceded the scientific program reports were made by Dr. R. H. Grube for the committee on revision of the constitution, and by Dr. A. C. Messenger on revision of the fee schedule. Further reports from these committees will be heard in April. Dr. Messenger also reported for the legislative committee on the reorganization

bill introduced in the state legislature, while the secretary discussed the obstetrical nursing problem and the nurse anesthesia situation.

The essayist of the occasion was Dr. C. L. Minor of Springfield, who took for his subject "Eye Inflammations with Respect to Systemic Diseases." He extended an urgent invitation to the members of the Greene County Medical Society to hear with the Clark County Medical Society a series of lectures by Dr. Roger Morris, professor of medicine of the Medical College of the University of Cincinnati, on "Late Developments in Medicine," and by Dr. J. J. Coons of Columbus, on "Metabolism."

The doctor mentioned that optic neuritis and iritis are now known to be due to syphilis in only 25 per cent. of the cases instead of a much higher percentage, as was formerly believed, and that kidney diseases seldom cause inflammation of the eyes.

He stated that experiments are now being conducted on the sugar content of the blood to determine what effect it may have on the recovery of patients after removal of cataract and whether it may possibly have anything to do with the production of cataract in the first place.

Dr. Minor reported a number of interesting cases, including one of violent inflammation of the eye which recurred from time to time and was due to chronic appendicitis. The patient went to five eye specialists at different times and always stated that he had never been sick. Later an acute exacerbation required removal of the appendix and the patient finally admitted he had suffered for many years with a pain in his side. The eye condition never occurred after appendectomy.

One case of low grade tonsillar infection and another of tooth infection in which no discomfort had been experienced by the patient at either site were reported. The eyes in both cases recovered completely after the tooth and tonsil conditions had been corrected. He emphasized the fact that he does not examine the teeth of patients but sends them at once to the dentist for X-ray.

Dr. Minor further reported a case of inflammation of the eye due to salpingitis, one of recurrent glaucoma with every menstrual period, one of eye inflammation due to eating oatmeal (protein sensitization) one due to eating limberger cheese, one case of hyperesthetic rhinitis with hay fever the year around due to sleeping on feathers, a violent attack of acute rhinitis due to the presence of a cat in the room, one case of eye inflammation from drinking milk. He stated that the cause of most of these and similar cases can be found but that some cannot, and that those that cannot may be aided by the results of the investigations in blood chemistry.

In closing, the essayist urged general practitioners to give more careful attention to patients affected with diseases that border or touch

the eye specialty, and warned against hurried diagnosis. The paper was followed by a thorough discussion and luncheon.—C. H. Denner, Secretary.

Shelby County Medical Society has adopted the following resolutions:

Resolved, That the Shelby County Medical Society is opposed to the use of nurses in the State of Ohio as anesthetists.

Resolved, That suitable legislation be introduced in the present session of the legislature to repeal the present act authorizing nurses to act as anesthetists under the direction of the surgeon.

Resolved, That the delegate and councilor of district are hereby instructed by the Logan County Medical Society to vote against any proposal of the State Society to stand neutral or favor any action favorable to nurse anesthetists.

Resolved, That the secretary of the Shelby County Medical Society be instructed to forward a copy of these resolutions to the president of the Ohio State Medical Association, with instructions to publish same in the next issue of *The Journal*.

Miami County Medical Society, in session at Piqua, March 3, heard a very interesting paper by Dr. J. H. Lowe on "Omissions and Commissions," in which the importance of reporting communicable diseases and births and deaths was emphasized. Dr. Lowe declared that the physician who fails to report communicable diseases endangers the welfare of the community and violates good citizenship. Dr. Gainor Jennings spoke briefly of legislative matters affecting public health and medical practice.—News Clipping.

THIRD DISTRICT

Hancock County Medical Society on March 2 entertained the ladies of the members families with a banquet at the Elks' Home, Findlay. Fifty-seven guests and members dined at sixty-three, and then listened to a very interesting address by Dr. B. G. Chollett of Toledo. The address was illustrated by motion pictures of the work being done by the Rotary Club of Toledo, for the crippled children of that city. Speaking of the great advancement that has been made in the care of crippled children in recent years, Dr. Chollett declared that surgical treatment really fulfills only a small part of their requirements, and emphasized the need of convalescent care, educational work, home care and selection of a proper vocation. It is his hope that this work will eventually be recognized as a state function and will become state controlled, just as the blind, mute and others are now charges of the state. Dr. Chollett divided cripples into two classes—those who can be treated as normal after care, and those who might better be regarded as institutional cases. He outlined the causes of crippled conditions and the individual care of each. Miss Ruth Kummer, state director for crippled children, spoke of the possibilities of this work if the \$90,000 appropriated by the state and still untouched were put to proper use. Dr.

Baker presented two crippled boys, who had been charges of societies represented by him and are now showing marked improvement. They were guests of the society at the banquet and seemed to enjoy themselves. The evening was such a success that an annual ladies' night was unanimously decided upon. Dr. Chollet was accompanied by Mrs. Chollett and most of the out-of-town members were present with their wives.—Nelia B. Kennedy, Secretary.

Logan County Medical Society met March 4 in the Chamber of Commerce, Bellefontaine, with an attendance of 15 members. Following an extra good luncheon, Dr. W. C. Pay read an excellent paper on "The General History of Tuberculosis and The Advances in the Knowledge of Same." Dr. Guy Swan then read an exceptionally good paper on "The X-ray and Tuberculosis," which emphasized the necessity for close co-operation between the internist and roentgenologist. Papers were discussed by Dr. Carey, county health officer, who told of plans for the clinic on tuberculosis, and also by Dr. McCracken who called attention to the great prevalence of tuberculosis among the ex-service men, especially those who had been gassed. He asked the society as a whole to help combat the idea among the laity that these men, though looking apparently in good health, are shirkers, inasmuch as the majority have definite pathological changes in the lungs as shown by the X-ray.

The application of Dr. Elam of West Mansfield for associate membership having been approved by the Board of Censors, he was elected to same.

Communications regarding the present law authorizing nurses to act as anaesthetists were read and fully discussed and resolutions similar to those contained in the report of Shelby County Society were adopted.—M. L. Pratt, Secretary.

FOURTH DISTRICT

Sandusky County Medical Society held an enthusiastic meeting at the Fremont Hotel, February 24, when the society was entertained at dinner by Dr. B. O. Kreilick. Twenty members and guests were present at the dinner and a number of others came later for the program. A communication from T. T. Frankenburg, Columbus, executive secretary of the National Anesthesia Research Society, requesting the society to adopt resolutions against the employment of nurses as anesthetists was tabled, pending action of councilors in this matter. Dr. James Ott of Clyde was elected to membership. The legislative committee reported on medical and public health issues pending in the legislature.

Drs. John G. Keller, councilor of the Fourth District, and Chester Waggoner, both of Toledo, delivered addresses. The former gave a highly scientific paper on "Phenomena of the Kidney in Nephritis," and the latter spoke on "Diabetes." These papers were a real treat for our members,

who united in extending a vote of thanks to Drs. Keller and Waggoner for their courtesy in coming before them with papers that revealed so much work, and elected them to honorary membership. The visiting doctors were compelled to leave just when the general discussion was getting good, but the members went at it tooth and nail. They vowed the stuff was somewhat over their heads, but proceeded on the contention that we all have gray matter which should be given an airing once in a decade or so. After the discussion some story tellers took the floor and kept the members in an uproar during a valuable social half hour.—C. I. Kuntz, Secretary.

Williams County Medical Society devoted its meeting of February 24, held at West Unity, to a symposium on "Scarlet Fever." The outline of study for the meeting included:

1. Symptoms: (a) Vomiting, (b) Angina, (c) Fever, (d) Eruption, (e) Strawberry tongue, (f) Desquamation.
2. Types: (a) Ordinary, (b) Mild, (c) Severe, (d) Toxic or Malignant.
3. Diagnosis: (a) Symptoms, (b) History, (c) Leede's Sign, (d) Pastia's Sign, (e) Leucocytosis.
4. Etiology: (a) Immediate, (b) Predisposing.
5. Transmission: (a) Direct, (b) Indirect.
6. Period of Incubation.
7. Period of Invasion.
8. Period of Infection.
9. Complications and Sequelae: (a) Angina, (b) Otitis, (c) Adenitis and Cellulitis, (d) Nephritis, (e) Cardiac Lesions, (f) Joint Lesions.
10. Prophylaxis: (a) Isolation of patient and nurse, (b) Concurrent disinfection, (c) Terminal Cleansing.
11. Treatment: (a) General management of patient; (1) Rest in bed, (2) Diet, (3) Bathing and inunction. (b) Medicinal, (c) Serotherapy.

Papers:

1. General Consideration of the Disease, M. V. Repogle.
2. Nose, Throat and Ear Sequelae, W. A. Held.
3. Nephritis and Cardiac Lesions, R. W. Beard.
4. Discussion of prophylaxis opened by the health commissioner. General discussion.—J. A. Weitz, Secretary.

Wood County Medical Society, in regular monthly session at Bowling Green, February 10, adopted resolutions opposing the administration of anesthetics by nurses. Copy of the resolutions will be found in the report of Shelby County Society on page 252 of this issue.—F. V. Boyle, Secretary.

FIFTH DISTRICT

Ashtabula County Medical Society held its 142nd regular meeting at Hotel Ashtabula, February 8, with an attendance of 21 members.

After an enjoyable dinner, which is having a stimulating effect on the attendance, the society

repaired to the hotel parlors for the literary and business part of the program. The president opened the meeting with introduction of J. J. Kurlander of Cleveland, whose subject was "Spinal Pain." The paper was highly interesting and instructive and was greatly appreciated. The next subject was "Treatment of Syphilis," in which all members took part in discussing. Dr. L. M. Guilinger was admitted to membership.—J. J. Hogan, Secretary.

Geauga County Medical Society gave a banquet at the Highland Hotel, Chardon, February 14, honoring Dr. Frank S. Pomeroy on the forty-second anniversary of his entrance into the practice of medicine in that county. Covers were laid for 17, the entire membership with one exception, and a number of guests being present. Among the after-dinner toasts offered in compliment to Dr. Pomeroy was the following, by Dr. Mary Goodwin of Cleveland, which speaks eloquently for his service and the insurmountable conditions faced: "Here's to the man who through 42 years, long years, has practiced medicine in this beautiful country, among the kindest people, and the deepest mud, and the damndest snow drifts, and who never has been guilty of one act that would bring discredit to this profession." Dr. Pomeroy personally reviewed the great progress made in medical practice and related some interesting stories of the earlier practitioners.—News clipping.

Lake County Medical Society held its March meeting at the Painesville Y. M. C. A. on the 7th. Attorney G. W. Alvord made the first address of the evening on "Some Observations on Medical Jurisprudence"—a splendid historical outline showing the progress made in medico-legal matters from early times to the present. The second speaker was Dr. W. Montgomery of Mentor, who gave a practical address on "Acquired Myxedema," in which he noted the various causes, the common signs and emphasized the thyroid treatment. He presented one patient cured in the past year. In an instructive address on "Modern Obstetrics," Dr. J. J. Thomas of Cleveland gave a history of the subject and outlined the progress made since the inception of modern medicine. To combat certain pending legislative proposals, a committee was appointed (Drs. W. P. Ellis, V. N. Marsh, C. O. Hudson, C. H. Quayle and E. S. Jones) to send a protest, in the form of a resolution, to the legislature.—E. S. Jones.

Lorain County Medical Society held a most profitable and enjoyable meeting in the Lorain Public Library, March 8. The scientific program was as follows: "Encephalitis Lethargica" with report of two cases, by Dr. Waite Adair, discussed by Drs. Valloyd Adair and W. S. Baldwin; "Clinical Significance of Painful Spine," by Dr. J. J. Kurlander, Cleveland. In discussing the first paper Dr. Valloyd Adair read a contribution

on this subject by Dr. Simon Flexner which was well received.—W. E. Hart, Secretary.

SIXTH DISTRICT

Richland County Medical Society's essayists on March 17 were Drs. Stephen A. Douglass, former superintendent of the State Tuberculosis Sanatorium at Mt. Vernon, and H. H. Myers. The former spoke on "Tuberculosis and Pregnancy—A Study of 300 Cases with a Review of Literature," and the latter on "Industrial Medicine, Its Ideals and General Principles."

Stark County Medical Society had an interesting meeting in Canton, March 15. Dr. William H. Cameron of West Penn Hospital, Pittsburgh, was the guest of the evening and addressed the society on "Radium Therapy." Local speakers were Drs. R. J. Pumphrey and W. E. Unger.

Summit County Medical Society's March 1st meeting was attended by 113 physicians from Cleveland, Cuyahoga Falls, Wadsworth, Doylestown and Akron. Forty-five physicians were admitted to membership and nine applications presented. At the request of Dr. T. D. Hollingsworth, who has faithfully and efficiently served as treasurer since 1917, the society voted to combine his office with that of secretary. Opposition was voiced to the reorganization bill introduced in the legislature. "Foreign Menace to American Medicine" was the subject of a masterly address by Dr. G. E. Follansbee, chairman of the compulsory state health insurance committee of the Cleveland Academy of Medicine. Discussion of the subject was opened by Mr. Robert E. Lee, a member of the Ohio Health and Old Age Insurance Commission, and participated in by Messrs. Vincent Stevens, secretary of the Akron Chamber of Commerce; E. C. Shaw, vice-president of the B. F. Goodrich Company; T. E. Smith, president of the Standard Bank; Rev. R. A. Dowd of St. Mary's Church, and Drs. E. J. Pettit, W. S. Chase and J. D. Smith. The meeting was one of the most successful and enjoyable in the society's history.—A. S. McCormick, Secretary.

EIGHTH DISTRICT

Athens County Medical Society met in the office of Dr. A. L. Pritchard at Nelsonville, March 8. It was decided to hold future meetings alternately in Athens and Nelsonville, and to precede the business and scientific sessions with a luncheon. Reports of cases covering the ground of sleeping sickness in its varied forms, some peculiar forms of paralysis, interesting facts in relation to a diagnosis of appendicitis and other instructive subjects, were presented by Drs. Pritchard, Cable, Walker and Welch. The cases were discussed and resulted in the development of much information of a helpful nature. Dr. Butts entertained with more of his original poems.

Licking County Medical Society, in session at Newark, February 25, enjoyed addresses on "Diagnosis and Management of Duodenal Ulcer" by Dr. Fred Fletcher, and "Surgical Lesions of the Kidney," by Dr. Robert Drury. Both speakers are residents of Columbus.

Muskingum County Medical Society held its March meeting in Zanesville on the 2nd, with 37 members present. The society adopted resolutions on the anesthesia question similar to those published in the report of Shelby County Society on page 252. Drs. Hugh A. Baldwin and H. B. Blakey, both of Columbus, were the principal speakers at the meeting. Dr. Baldwin delivered a stereopticon lecture on "Phallic Worship," while Dr. Blakey read a paper on "Nephritis."

Washington County Medical Society met in regular session at Marietta, March 9. There was a good attendance. Dr. O. D. Barker, Parkersburg, W. Va., gave a splendid talk on "Some Facts of Diagnostic Importance as Revealed Through the Use of the Cystoscope and Urethral Catheters." The histories of a number of cases were given and illustrated with X-ray photographs of the cystoscope and urethral catheters in situ. Some of the photos, the work of Dr. Brice of Parkersburg, were excellent. Discussion was opened by Dr. J. A. McCowan of Marietta.—A. G. Sturgiss, Secretary.

NINTH DISTRICT

Scioto County—Hempstead Academy of Medicine, meeting in Portsmouth, February 14, was favored with an illustrated lecture by Dr. G. C. Schaeffer of Columbus on "Facial Reconstruction." In addition to the society membership, a number of local dentists and other visitors attended the meeting. A resolution was passed opposing the administration of anesthetics by nurses and urging legislation during the present session to repeal the present act. Dr. Robert Carothers of Cincinnati addressed the March 14 meeting on "Goiter."—H. F. Rapp, Secretary.

TENTH DISTRICT

Ross County Medical Society observed March 2nd as "case report" night. A number of interesting and unusual cases were presented and carefully considered and discussed. The meeting was attended by 18 members and two visiting surgeons from Camp Sherman.—News Clipping.

Extension of Bureau of Juvenile Research

Delinquents and criminals of the feeble-minded type will not be permitted in Ohio to become the parents of children, according to plans announced by the State Board of Administration. Briefly stated, the plan is as follows:

Diagnose each case that comes to or leaves the two state industrial schools and the two state re-

formatories, and isolate for the rest of their lives those whose return to society would be a definite menace from the standpoint of their having children with feeble-minded, delinquent or criminal tendencies.

Place those thus segregated in surroundings where they may lead a happy, safe and useful existence.

Extend the plan gradually to criminal institutions so that those of feeble-minded tendencies may be separated from the other types of criminals.

Develop as rapidly as possible the central farm for feeble-minded at Orient to its capacity and follow that up with two similar farms, one in the northern and the other in the southern parts of the state.

Dr. Edmund M. Baehr, new member of the Board, estimates that one-fourth to one-third of all reform institution cases are of the type that demands this protection of society. The working out of the new plan will be accomplished by extending the scope and facilities of the State Bureau of Juvenile Research, under the direction of Dr. H. H. Goddard. For this purpose a special request for \$135,000 for the Bureau of Juvenile Research has been included in the biennial budget submitted by the Board of Administration.

The Bureau of Juvenile Research now examines an average of 250 cases a year, but only in specific instances where an examination is requested by an institutional head. Under the proposed plan an annual average of 4000 feeble-minded persons would be examined.

The bureau is also to have referred to it by the board of administration all cases of proposed paroles for investigation as to their desirability from the public standpoint. Dr. Baehr declares that the feeble-minded problem in Ohio has reached "staggering proportions." State institutions are wholly insufficient to care for all the cases requiring custodial care; between 6000 and 7000 cases which should be in institutions cannot be cared for.

Federal Health Work

"Lest we forget," and simply as a reminder, we reproduce a plank in the platform of the Republican party, as adopted last June:

The public health activities of the federal government are scattered through numerous departments and bureaus, resulting in inefficiency, duplication and extravagance. We advocate a greater centralization of the federal functions, and in addition urge the better co-ordination of the work of the federal, state and local health agencies.

It is hoped that the party now in power will not forget an important plank of the platform on which it rolled into power.—*Journal, A.M.A.*

Cleveland Clinic, Modernly Equipped with Every Facility for Study and Research, Formally Opened

The new Cleveland Clinic, founded by Drs. George W. Crile, William E. Lower, F. E. Bunts, and John Phillips, was opened with impressive ceremonies, February 26, marking an epochal step forward in medical progress in the field of clinical practice. Five hundred physicians attended the opening, among them being Dr. William J. Mayo of the Mayo Clinic, Rochester, Minnesota; Dr. Joseph Bloodgood of Baltimore, members of the Cleveland Academy of Medicine, and prominent physicians and surgeons from Toledo, Columbus, Cincinnati, Indianapolis, and various other parts of the country.

After the founders had told of their ambitions and purposes in establishing an organization which would work together for the best interest of the sick and the furtherance of scientific investigation into those things pertaining to modern medical practice, Dr. Mayo, in a forceful address, pictured a new era of medicine when communities generally shall have the benefit of the professional knowledge, ability and resources of organized groups of physicians. He sketched the development of the group idea in medicine, asserted that physicians had not cooperated sufficiently heretofore in fundamental health legislation; declared that citizens of low average mentality exert too great influence politically because easily organizable; called functional nervous diseases the smoke screen of quackery and, recounting the experiences of England and Germany with health insurance as "anything but desirable," asserted that striking features of the medicine of the immediate future will be the development of medical cooperation in which the state, the community, and the physician must take part.

He declared the opening of Cleveland Clinic to be of great importance to American medicine, since it represents a scientific response to the rapid advance which necessitates professional cooperation in order that the known facts of medicine may be applied to clinical practice. He brought out the fact that the clinic really stands for much more than its name indicates, for it proposes to add scientific research and medical investigation to its functions, thereby benefitting, through scientific study of the causes and the prevention of disease, not only the public and the profession of today but those of the future as well.

Concluding his address, Dr. Mayo said:

"Properly considered, group medicine is not a financial arrangement, except for minor details, but a scientific cooperation for the welfare of the sick. Medicine's place is fixed by its services to mankind; if we fail to measure up to our opportunity it means state medicine, political con-

trol, mediocrity, and loss of professional ideals. The members of the medical fraternity must cooperate in this work and they can do so without interfering with private professional practice. Such a community of interests will raise the general level of professional attainments. The internist, the surgeon, and the specialist must join with the physiologist, the pathologist, and the laboratory workers to form the clinical group which must also include men learned in the abstract sciences, such as biochemistry and physics. Union of all these forces will lengthen by many years the span of human life and as a by-product will do much to improve professional ethics by overcoming some of the evils of competitive medicine."

Work on the clinic building, situated at Euclid Avenue and Ninety-Third Street, was undertaken about a year ago. The structure and equipment represent an expenditure of \$500,000. It was designed by F. J. Ellerbe of St. Paul, architect of the world-famous Mayo clinic building in Rochester. The purposes of the institution have been clearly comprehended by the architect and ably carried out by the builders, with the result that the new clinic is unsurpassed in comprehensiveness, plan of construction and equipment.

The attractive exterior of mottled white equitable brick is of Italian renaissance design, not severe in appearance as the ordinary office structure, nor yet in the least ornate. Amidst all its special devices and business-like arrangements the interior is particularly quieting and restful, the woodwork throughout being weathered oak, and the halls finished in light buff and the rooms in light gray.

From an entrance to the building on Euclid Avenue, a corridor leads directly to the registration bureau. Back of this is a stock room for records. From either side of the registration desk a small lift carries records and data to the second floor.

The entire west side of the first floor is devoted to the X-ray laboratories, including viewing rooms, developing rooms, X-ray operating room, X-ray treatment room, fluoroscopic rooms, dressing rooms and lavatories, waiting rooms and office, sixteen rooms being devoted to this department.

On the south end of the first floor is a sterilizing room and adjoining it a small operating and dressing room for minor operations and redressings. Here also is a media room belonging to the series of clinical laboratories which, except for one room assigned to the statistical department, occupy the entire east side of the first floor. Here are the rooms for gastric analysis,



View of the New Cleveland Clinic

serologic, bacteriologic, chemical and other clinical investigations, fourteen rooms in all.

The reception room, which occupies the whole center of the second floor, is most attractive and restful in appearance. Finished in buff Rookwood tile, it emphasizes the simplicity and dignity of the general architectural design and is singularly lacking in the cold severity commonly found in buildings of the kind. Offices on the four upper floors are grouped around the well of this reception room, which rises clear to the skylight.

On the east and west sides of this floor are consulting rooms and the bookkeeping office. On the north side is the telephone switchboard and in the northwest corner the waiting rooms for those who are to be assigned to hospitals.

On the south side of this floor are a series of cystoscopic rooms, each corridor having viewing boxes for the examination of X-ray plates.

The reception room is the "heart" of the building; radiating out from it, besides the telephone system, are special signaling systems for speedy intercommunication.

The third floor is given over entirely to the examining rooms with their special equipment; offices for the various specialties and rooms for the electro-cardiograph and for metabolism estimations.

On the fourth floor are the founders' conference room, the executive offices, the library and its stack room, printing shop, editorial offices,

the photographic and art department, and a large room in which will be established a museum of adaptation and disease.

On this floor, also, is the new department of bio-physics, occupying a large laboratory on the south side and a small laboratory and an office and instrument room on the west side.

On the fifth floor, at the south end, is the electro-mechanical engineering department.

The building has three stairways and two elevators. A laboratory on each floor is connected by means of a small hand elevator with the main laboratory on the first floor. A similar small hand elevator on the west side carries records from the record department to the editorial department.

To insure continuation of the clinic in future years, a clinical foundation has been incorporated under a state charter, the trustees of which include other than medical men, men whose interest in education, in research and in humanity would in the future help to stabilize and guarantee the proper carrying out of the purposes of the foundation. It was announced at the opening exercises that equities amounting to \$100,000 had been delivered to the foundation, and a steadily increasing endowment fund insured through the pledge of the founders to donate one-fourth of their income and that of their successors to the foundation.

Composing the staff for the present will be

nine other physicians, specializing in various branches, and a corps of technicians. The physicians are Drs. H. G. Sloan, Thomas P. Shupe, B.

H. Nichols, Thomas Jones, J. M. Waugh, Henry John, Hugo Fricke, John Tucker and Benjamin Harrison.

The Fundamentals of Successful Organization*

Dr. Clarence I. Kuntz, Fremont, Ohio

Secretary Sandusky County Medical Society

There has, in all probability, never been a time in the history of the world, when there has been so much agitation and urging of organization as the present day. A neutral observer would almost be forced to the conclusion that the poor earth-beings were of the firm conviction that their very existence depended upon some type or other, even a multiplicity of types. And, if we but turn the eyes into the soul, we can readily see that such a conclusion is entirely justified. It will be the purpose of this paper to show that in all this there is much wasted and misdirected energy.

The title is broad, and purposely so. We will, of course, be chiefly interested in medical organization. This for the simple reason, that of all organizations, it should easily be the criterion. It has the noble aim and unselfish sacrifice of numerous members to inspire lofty conduct. There is no need for it to be a melting-pot for discordant elements.

The very essence of the profession is such that successful union of its constituents into a harmonious entirety should be pre-supposed. In point of service to humanity, the physician stands second only to the minister of the Gospel. His life, however, in order to fulfill this exalted position must be the embodiment of christian principles and motives. If he has studied and prepared himself to enter this field of endeavor for any other motives, his failure is fore-ordained. And, if enough men of this type enter its portals, the profession falls from its high estate to the level of a mere business. Its watchword ceases to be,—“The greatest service possible to humanity.” It needs must stoop to the battle-cry of the rabble, the slogan of the purely mundane,—“Get the business, get the money. Do the other fellow or he will do you.” Nature’s laws are inviolable and assuredly as night follows day so surely will degeneration follow such selfishness.

What the world needs today is men who overtop their profession, be that what it may. Men whose outlook upon life visions a world of beauty. Men through whose veins courses a death-like tenacity of purpose not only to keep that beauty unsullied but to enrich it, to enhance. This is impossible to the narrow, selfish man. He sees but himself. He is the whole world and the beauty thereof. He bends all his energies to win by fair means or foul, the admiration, the applause, the

fame, if you please, that would in the natural course of events accrue to a real man. He forgets that the very soul of a real man, a great man, rebels against the suave, oily, evasive and unscrupulous methods of advertising and attracting attention that are so much in vogue and comprise the chief armamentarium of many modern so-called successes. He fails to realize that the very fact that he makes these braggart efforts, is an acknowledgment to men of intelligence, that he lacks those prerequisites necessary to place him among truly great men.

A man of these proclivities is a disturber of the peace. He is a blusterer of the jungle wild. He knows no other instincts save those of his appetites. Only he is infinitely lower than the jungle beast, who slays only to satisfy his immediate needs, and never wantonly. And his needs are simple. He is no glutton for show or notoriety.

The man, then, whose life is lacking in these elements that are the virtues of the jungle beast, is no truly educated and refined man. His education and civilization are but a veneer. Were a few of the restraints of civil law removed, that man would kill with a physical weapon just as cheerfully and indifferently. The motive back of his sweet speech and smooth contortions is not the outgrowth of a refined and genteel character, but the determination to fascinate, even as the snake, with luminous eyes, vibrating tongue, and softly undulating body, fascinates and holds its victim.

Man does not live by meat alone, but by the spirit, the things of the spirit—the soul, if you please. When meat alone is consumed, the soul languishes, dwindles, dies. And a soul-less man has no place in the economy of life. He cannot be trusted. He will not be trusted. Now, no organization is stronger than its component parts, the individual. No chain is stronger than its weakest link. Herein, then, lies the solution to the problem.

Individuals, the component parts of an organization, will not be changed by signing an application blank. If they are of the stamp portrayed, joining an organization will but mean to them the possibility of using this new move to further their aims and ambitions. This at once precludes successful cooperation. Men instinctively feel the existence of such motives. Thus, instead of adding something harmonious to the organization, a discordant note has been intro-

*Read before the Sandusky County Medical Society in session and Fremont, January 29, 1921.

duced. It were, if you please, as if the artisan had forged a weak link into the chain of organization.

It is this situation that is creating havoc in all organizations, irrespective of kind or description. Men are joining organizations with the idea of getting out of them all they can. This is narrow and selfish. Men study the element in which they find themselves, to ascertain what impetus their new status will give to their desire for power or personal achievement.

This suggests a development that may be a surprise to many. It is an unfortunate culmination of a well intended plan of service, but traceable to that innate monster, selfishness, rampant in every human breast. This terrible monster causes the soul to lose sight of the noble ideals of life and prompts to self-aggrandizement. The man with political ambitions gathers about himself a coterie of dupes and, with the prestige an organization has, climbs to leadership, in the hope, that this will give him a desired prestige, not only in the immediate community, but broadcast over the land. Another hopes that his activities will give him free advertisement and, thus, enlarge his business or profession. And yet another wishes to be a demagogue for the mere amusement he derives from being in a position of authority.

Such, gentlemen, is the status of organizations today, organizations of fraternal nature to those of the guilds. And, when one meditates on the ideals for the attainment of which they were designed, the pity of it becomes painfully apparent.

Medical organization is governed by the same inviolable principles. There can be no harmonious cooperation within, when all is discord and selfishness without. No one can expect men, who scarcely speak and are ever ready to take an undue advantage of the other, to work successfully in a body. Such a body may have the noblest aspirations under God's heaven, but it will get no further than the individual. As the individual, so the organization. It has been said, that, if the beasts of the jungle would have had the power of concerted effort and action, they could have successfully combatted the infringement of civilization upon their domains. Are we, then to be stigmatized in our efforts to promote successful medical organization, with showing no greater ability than that of selfish individualism?

The medical profession has a standard of ethics and principles that cannot help but have the respect of every thinking man. If the profession is not held in the esteem it should be, the reason must be sought. If the cause lies within the profession itself, it must be instantly eradicated, a wide and careful excision must be made. If the fault lies with the laity, they must be taught to respect an institution that constantly fights the forces inimical to life.

Now, let us see how these problems can be solved. There is no doubt that much of the

abominable cult practice and quackery, that is the bane of every conscientious medical man today, has had its incipency in the evil doing of the profession. This evil-doing may have been sins of omission or sins of commission. Sins of omission, by failing to promulgate and "carry on" activities that would be a benefit to humanity and, thus, claim and command their eternal gratitude. Sins of commission, by allowing the devil to sow cockel in the heart and prompt them to break, not only the laws of ethics of the profession, but also those of Nature and Nature's God. There is no need to cite examples of these. Everyone knows what they are. Then, when these things stood revealed, men ceased to have the regard they formerly knew for the noble calling of Medicine and were only too willing, and, logically so, to believe that it was far from a calling of service to humanity. It came to connote, mere business.

At this point the writer wishes to vent his invective upon all schemes designed to get business. We see them thrown broadcast by quasi-medical journals. They are beneath the contempt of any medical man who loves his calling. Their methods would mean only more disorganization. Such methods are a prostitution of the spirit of the profession. By their means, not the best man, but the best advertiser wins. Such methods confirm the laity in the belief that medicine is a mere business. One of the schemes that has recently come to notice, was to send out cards to all names on list of clientele, when, for instance, an epidemic was feared. This, with the idea of making the people think that the man had a great interest in their welfare, when his sole motive was to get business—a sordid motive, unworthy of any great healer.

We have now depicted the present workings of most organizations, the medical included. If this continues we will fail to do that which we swore to do, namely, give our entire lives to the Godly vocation of healing the sick, caring for the blind and nursing the maimed. In other words, we will fail in our life's work.

In conclusion, then, let all understand that successful organization depends upon the individual. Let the individual know that only by a life of devotion to the principles of ethics and obedience to Nature's laws and Nature's God, love and regard for his colleague and competitor, as well as his patients and fellow-men, can he become an integral, live and valuable component of medical organization. Finally, let the organization realize that it has the God-giving duty of returning to the medical vocation all the confidence of the world in its truthfulness, its honesty of purpose, its determination to alleviate, not only physical ills, but to guard and protect against spiritual evils as well.

DEATHS IN OHIO

James Way Allbritain, M. D., Ohio Medical University, Columbus, 1898; aged 45; died at his home in Columbus, March 5, after an illness of two weeks with encephalitis lethargica. Dr. Allbritain had been a resident of Columbus practically all his life. During the war he served with an aero squadron overseas. His parents, two brothers and a sister survive.

Charles Caldwell, M. D., Medical School of Harvard University, Boston, 1867; aged 80; died at his home in Mansfield, February 26. Dr. Caldwell was a veteran of the Civil War. He retired from active practice some years ago.

Albert Clayton Carney, M. D., Medical College of Ohio, Cincinnati, 1889; aged 52; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Hamilton, March 2, from complications after an illness of five months' duration. Dr. Carney engaged in general practice in Dayton and El Dorado before locating in Hamilton twelve years ago, when he limited his practice to diseases of the eye, ear, nose and throat. His widow and one son survive.

William J. Dudley, M. D., Starling Medical College, Columbus, 1901; aged 46; died at his home in Wilmington, February 14, from heart disease.

H. E. Gardiner, M. D., Columbus Medical College, 1889; aged 55; former member of the Ohio State Medical Association; died at his home in Clayton, February 15. He is survived by his wife and one son.

Joseph Hausman, M. D., Cincinnati College of Medicine and Surgery, 1896; aged 61; former member of the Ohio State Medical Association; died at his home in Carthage, near Cincinnati, February 8.

Sharp W. Hemphill, M. D., licensed to practice in Ohio, 1896; aged 72; died at his home in East Liverpool, February 23, from complications. He leaves his wife, two sons and one daughter.

Joshua M. S. Heath, M. D., University of Pittsburgh School of Medicine, 1900; aged 50; member of the Ohio State Medical Association; died at his home in Bellaire, February 15, from cerebral hemorrhage. Dr. Heath had practiced medicine in Bellaire for 20 years, and in point of years of practice was one of the oldest physicians there. His widow and three daughters survive.

Marion G. McBride, M. D., Cleveland University of Medicine and Surgery, 1883; aged 62; died at the home of his sister in Garrettsville, February 20, of paralysis. Dr. McBride formerly

practiced at Ravenna, but retired a few years ago on account of ill health. He leaves his wife, a sister and one brother.

Marcus A. McKendree, M. D., Eclectic Medical College, Cincinnati, 1884; aged 67; member of the Ohio State Medical Association and Fellow of the American Medical Association; died in St. Vincent's Hospital, Toledo, February 23, following an operation. Dr. McKendree's home was in Bowling Green where he located for practice two years after completion of his medical education. He is survived by his wife, Dr. Lydia McKendree, with whom he was associated in practice.

Joseph Ransohoff, M. D., Medical College of Ohio, Cincinnati, 1874; aged 67; died at his home in Cincinnati, March 10, after a protracted illness. Dr. Ransohoff was widely known in this country and abroad for his professional achievements and contributions to medical literature. He supplemented his medical education in this country with four years of study in Vienna, Wurzburg, Paris, Berlin and London, and while studying in the latter place in 1877 was made a Fellow of the Royal College of Surgeons. He returned to Cincinnati to take up practice and in 1879 became professor of anatomy in Ohio Medical College, which chair he filled until 1902, when he was appointed to the chair of surgery. At the time of his death Dr. Ransohoff was professor of surgery and clinical surgery at the University of Cincinnati Medical College, and a member of the surgical staffs of the General, Jewish, and Good Samaritan Hospitals.

Dr. Ransohoff's fraternal affiliations included membership in the Ohio State Medical Association, Southern Surgical Association, Western Surgical Association, American Surgical Association, Society of Thoracic Surgeons, and Fellowship in the American College of Surgeons, the American Medical Association and the Royal College of Surgeons of England. His widow, three daughters and two sons, one of whom is Dr. J. Louis Ransohoff, who during the last several years has been associated with his father in practice, survive.

William Scott, M. D., Medical College of Ohio, Cincinnati, 1880; aged 73; died at his home in Loveland, February 22. Dr. Scott practiced in Clermont County for more than 40 years. He was active in civic affairs, having served as mayor, village treasurer and member of the board of education. His wife, two daughters and one son survive.

John H. Spitler, M. D., Medical College of Ohio, Cincinnati, 1879; aged 70; died at his home in Dayton, February 20, from hardening of the arteries. Dr. Spitler was formerly a resident of Greenville. He spent practically his entire professional life there, removing to Dayton on his retirement from practice a year and a half ago.

Besides his widow, Dr. Spitler is survived by one son, Dr. R. H. Spitler of Dayton; one daughter, and four brothers, three of whom are physicians—Drs. Levi Spitler, Dayton; Charles Spitler, Saratoga, Indiana, and S. W. Spitler, Wellington, Kansas.

Ernest L. Wrentmore, M. D., Western Reserve University School of Medicine, 1901; aged 47; died at his home in Warren, February 23. Dr. Wrentmore had practiced in Warren for two years, moving there from West Farmington, where he lived for 14 years. He leaves a daughter, his parents and three brothers.

Frank Young, M. D., Western Reserve University School of Medicine, 1872; aged 78; member of the Ohio State Medical Association; died at his home in Lorain, February 26, from paralysis. Dr. Young was the oldest practicing physician in Lorain and continued his medical work

until two weeks before death. He held many offices in the local G. A. R., served as a member of the board of education, president of the trustees of the Lorain County Children's Home, and at the time of his death was police surgeon for the city. He is survived by his wife and one sister.

Rosetta L. Gilchrist, M. D., Cleveland University of Medicine and Surgery, 1890; aged 60; died at the home of her daughter in New York, February 17. Dr. Gilchrist resided in Ashtabula and left that city for New York only ten days before her death. She was active in the practice of medicine for many years, and was also well known for her literary work, having written several works which attained prominence, among them being "Apples of Sodom." Dr. Gilchrist's husband was the late Dr. William L. Gilchrist, who died several years ago. She leaves a son and two daughters.

Report of Committee on Anesthesia

J. F. Baldwin, M. D., Chairman.....Columbus
W. E. Lower, M. D.....Cleveland
E. Otis Smith, M. D.....Cincinnati

The Committee appointed by the Council of the Ohio State Medical Association to investigate matters connected with anesthesia, sent out questionnaires to a representative number of surgeons and hospital superintendents throughout the country, asking their views (a) as to the choice of graduate physicians or graduate nurses in the giving of anesthetics: (b) as to the responsibility of the surgeon in the determination of what anesthetic agent should be used: (c) as to the choice of the anesthetic agent for ordinary purposes: (d) as to deaths which had occurred from anesthetics: (e) as to fees or salaries paid for the giving of anesthetics, and asking for any the giving of anesthetics, and asking for any suggestions which might be offered. The questionnaire was sent to 500 surgeons, the names being taken from the last directory of the American College of Surgeons, and to 400 hospitals taken from the Directory of the A. M. A. Replies have been received from a gratifying number of surgeons and hospitals. In a number of cases the questionnaires were not answered in full. The following is a synopsis of replies:

- 241 surgeons assume entire responsibility for the choice of anesthetics.
- 21 leave it to the anesthetist.
- 49 assume joint responsibility with the anesthetist.
- 3 surgeons prefer chloroform.
- 238 prefer straight ether.
- 2 use ether with oxygen.
- 22 use nitrous oxide-oxygen.

- 65 use ether with nitrous oxide as a preliminary.
- 103 prefer the nurse anesthetist.
- 181 prefer a medical man.
- 47 are indifferent, using either.
- As to Hospitals—*
- 135 prefer ether.
- 10 nitrous oxide-oxygen.
- 36 ether, with nitrous oxide as a preliminary.
- 83 prefer the nurse anesthetist.
- 78 the physician anesthetist.
- 28 use both indifferently.

Most of the replies as to preferring the nurse or the physician give no special reason for the preference. Those who assign reasons for the physician uniformly state that they feel that the function is medical in character, and that the responsibility should be placed only upon a medical man.

As the employment of the nurse is in a sense an innovation, the Committee has thought it wise to quote briefly from some of the physicians and hospital superintendents who prefer the nurse to the physician.

A considerable number of deaths were reported, but without such details as to render the reports of any value: nearly all were at the hands of hospital internes.

Universal custom and, so far as we know, all court decisions hold the surgeon responsible for all details connected with the operation. In the case of a fatality from the anesthetic, it is the surgeon who signs the death certificate, and who explains to the friends the details of the untoward accident. The anesthetizer is therefore merely an assistant in the operation, and it is no more logical to require that he be a graduate in

medicine than to insist that all other assistants be medical graduates. So far as we can learn there is no demand from the public for any change excluding the trained nurse. Choice of the anesthetist is always left by the patient to the surgeon, except that in case of a second operation the patient may occasionally request the same anesthetist that presided at the first operation.

In many communities it is practically impossible to secure the services of a competent medical anesthetist, while all large hospitals are more and more recognizing the prime importance of having a resident anesthetist.

In considering this matter the Committee feels that it should be the aim of the profession to proceed in such a way as will work the greatest good to the greatest number, and that the interests of the patient and the public should be paramount.

With few exceptions, the researches into the properties of the various drugs and gases employed for anesthetic purposes have been made by investigators in various special fields—physiologists, pharmacologists, chemists, etc., and not by those who administer the anesthetic. To such investigators the progress in anesthesia is largely due, and to them should be given due credit and encouragement; but the attempt to limit the administration of anesthetics to certain groups of medical men is being made, we believe, from an entirely different motive.

Most physicians by a few weeks of instruction and watching may become very satisfactory anesthetists, but as anesthetists they have no offices to maintain, no office expenses, instruments, books, journals, etc., and only nominal responsibility. That they should, however, assume to be "specialists," and as such demand and receive special compensation, presents a condition which is unjust to the patient, unfair to the general practitioner, who is their superior, and entirely contrary to professional traditions. All routine hospital work is most satisfactorily compensated for by suitable salaries, and as duties of anesthetists are purely routine, like those of the hospital pathologist, druggist, etc., a suitable salary would be the best method of compensation.

Of all surgeons who recommend ether as the anesthetic of choice, the great majority specify its administration by the simple "open-drop" method; not one recommends the expensive, complicated and cumbersome apparatus, seen in a few hospitals, and which seems to be merely camouflage—apparently designed to magnify the office and impress immature spectators.

Your Committee would therefore report as follows:

(1) The administration of anesthetic agents is almost entirely a routine procedure, and something which can be done by any intelligent physician or nurse, or even by a layman who has

had a reasonable amount of instruction in their administration. (Ochsner's *Surg. Diag. and Treatment*, Vol. 1, page 97, quoted among "Statements of Surgeons"). With the exception of a few highly trained men, as suggested by Dr. Hugh Cabot, the duties of the anesthetists are not such as to render the administrators in any scientific sense specialists.

(2) The work of the anesthetist being as a rule routine, the suggestion of many of the hospital superintendents and surgeons that the position should be placed on a salary, like that of hospital superintendent, pathologist, etc., meets with our approval in the case of hospitals which have enough work to justify the creation of this position. For smaller hospitals we would recommend that the work, so far as possible, *should be done by experienced physicians or nurses, rather than by inexperienced physicians or assistants, including internes*—unless the latter are under the immediate supervision of a skilled anesthetist instructor. A number of hospitals report the employment on salary of a part-time anesthetist, who devotes the rest of his time to ordinary professional work. Where the number of operations does not justify a whole-time or part-time salaried anesthetist, compensation must be as at present by suitable fees.

(3) Since anesthesia deaths, when at all preventable by the anesthetist, usually result from carelessness or inattention, we recommend that under no circumstances should the surgeon permit the attention of the anesthetist to be diverted from his work by watching the operation, by assisting in any way in its performance, or by conversation with visiting physicians, nurses, or others.

(4) We see as yet no reason for any change in our state law relating to the administration of anesthetics by graduate nurses who have been particularly instructed in their work. The amount and character of such instruction should be determined by rules adopted by our State Board of Registration.

STATEMENTS BY SURGEONS

"The anesthetist should be a medical man if it is possible, or a carefully trained woman, preferably a nurse. The best anesthetics are conducted by women at the present time, because it is possible to select women with the highest degree of intelligence and judgment for this work, while medical men possessing these qualities can almost never be induced to elect anesthesia as a specialty."—*Surg. Diag. & Treatment*, Ochsner, Vol. 1, p. 97.

"Our experience with the nurse anesthetist has been very satisfactory."—A. J. Skeel, Cleveland.

"I have felt that this work can be safely trusted to the graduate nurse especially trained for the work."—L. L. Bigelow, Columbus.

"Due to psychological causes and more gentleness, the nurse succeeds better than the interne."—A. J. Graham, Chicago.

"If we could pick our nurse . . . and have her trained by a competent anesthetist . . . and have her give all anesthetics for the hospital, we would have little trouble from the anesthetic side of surgical work."—D. A. Funk, Vincennes, Ind.

"Women make better anesthetists than men, and very much better than internes."—W. A. Bryan, Nashville, Tenn.

"In my opinion the best anesthetist is a nurse who has been given a special course in some recognized school. I prefer a nurse to a physician."—Chas. C. Green, Houston, Texas.

"A specially trained graduate nurse, if dependable, would be for many reasons the best."—C. H. Sample, Saginaw, Michigan.

"I really prefer to have a nurse who has been well trained in some of the various hospitals (New York Post-Graduate, Crile's or Mayos')."—J. L. Campbell, Atlanta, Georgia.

"On the whole I prefer a nurse."—John M. T. Finney, Baltimore, Md.

"A good sensible trained nurse, with the necessary training, and allowed to exercise her own judgment, gives the best results."—J. A. Vaughan, Memphis, Tenn.

"The training of the nurse anesthetist should be under a skilled anesthetist, and later under a skilled surgeon."—J. B. Deaver, Philadelphia.

"A nurse is apt to be better trained than a graduate of medicine."—John B. Roberts, Philadelphia.

"Nurses specially trained have given me great satisfaction."—H. Grad, New York.

"I believe that a specially trained graduate nurse is technically satisfactory."—Leadre Heazlit, Auburn, N. Y.

"I am more favorable to the good nurse anesthetist."—M. B. Clopton, St. Louis, Mo.

"I have had physicians and nurses as anesthetists: of the two the latter have proven preferable in my clinic."—John G. Clark, Philadelphia.

"Generally speaking the specially trained nurse who has been given instruction several months by an anesthetist is quite satisfactory."—H. J. Boldt, New York.

"I think the nurse anesthetist will take more interest in the work, be more promptly on hand, and not looking to surgical preferment will be as a rule most satisfactory."—H. H. Grant, Louisville, Ky.

"At the Massachusetts General Hospital paid trained nurse anesthetists are used."—Chas. L. Scudder, Boston.

"A trained nurse with an aptitude for this kind of work fills the want best."—Hiram N. Vineberg, New York.

"I feel that a satisfactory method, and the more feasible one for many hospitals, is the employment of a specially trained graduate nurse."—Emil Novak, Baltimore, Md.

"In the training of graduate nurses for specialization in anesthesia I would insist . . . together with a three months practical training under an experienced nurse anesthetist."—Chas. H. Frazier, Philadelphia.

"I am very heartily of the opinion that as anesthetists go, under competent teaching and supervision no one could give better service than

the carefully trained nurse."—Howard A. Kelly, Baltimore.

"The intelligent trained nurse, who has made a special study of the subject, and who has natural aptitude, does just as good work as the specializing physician, and is especially suited for women and children."—David Cheever, Boston, Mass.

"The nurse anesthetist by far."—John O. Polak, Brooklyn.

"The specially trained graduate nurse I consider the best anesthetist for a general hospital."—J. M. Flint, New Haven, Conn.

"An intelligent elderly trained nurse, with a suitable personality, gentle and inspiring confidence on the part of the patients . . . will give the best service as an anesthetist in the average of the largest number of cases."—A. Goldspohn, Chicago.

"A nurse is preferable because she can be used at other times for work that would not be expected of a professional anesthetist. It is also easier to make arrangements by which a busy surgeon can set his own hour for operation and the anesthetist will always be available."—C. Jeff. Miller, New Orleans.

"Nurses have the right adaptability and requisite temperament, and should be encouraged by surgeons and hospital managers, and wherever possible they should be more or less permanently attached to the institution, and where feasible should be allotted to one surgeon if his work is sufficient to warrant it."—R. H. Jackson, Madison, Wis.

"I personally have administered more than six thousand anesthetics, using for this purpose chloroform, ether, chlorid of ethyl and ether. . . . When I had administered 300 or 400 anesthetics I was of the opinion that I knew all there was to be known about anesthetics and their administration. When I had administered 1000 anesthetics I was of the opinion that I knew nothing about their administration. However, after having administered 6000 anesthetics I came to the conclusion that there was very little to be known beyond what I had learned after the first few hundred."—C. M. Shepard, Columbus, Ohio.

"There is no royal road to becoming a good anesthetist. We have not been very sensible or chivalrous in putting the ban on nurses acting as anesthetists. Sometimes she does this work better than the doctor loaded down with prerogatives."—Mark Millikin, Hamilton, Ohio.

"Graduate nurses, properly picked and trained, have been the most satisfactory. Not even trained M. D. anesthetists have been so satisfactory."—James A. Johnson, Minneapolis.

"We have found that ether anesthesia, given by nurse technicians especially trained to the work, and given under the direct supervision of the operating surgeon and his assistants in the operating room, is the most satisfactory."—W. J. Mayo, Rochester, Minn.

"I am disposed to believe that a nurse properly educated in the knowledge of anesthetics, is perhaps the better method of administration."—A. VanderVeer, Albany, N. Y.

"I have yet to have the experience where the trained medical man as an anesthetist was as satisfactory, especially as to the safety of the patient, as the average trained nurse anesthetist."—J. F. Percy, Galesburg, Ill.

"I believe that well trained, high class nurses,

who show an aptitude for giving anesthetics, make the best anesthetists."—E. C. Moore, Los Angeles, California.

"Anesthesia is too narrow and simple a field to become a specialty for physicians."—Carl W. Wahrer, Sacramento, California.

"The best way to develop an anesthetist is to select an intelligent graduate nurse. . . . and let her work with an experienced anesthetizer until she demonstrates her ability to give the anesthetic satisfactorily."—Stuart McGuire, Richmond, Va.

"Have found that I got better service from the trained anesthetic nurse, paid a yearly salary by the hospital."—Walter G. Stern, Cleveland.

"Should the administration of anesthesia be confined to persons with a medical diploma a grave blunder would be made involving financial damage to the patient wholly out of proportion to the possible benefit. I believe the argument that anesthesia is a very important part of the operation, and should therefore be entrusted to a trained physician, to be without merit, as the courts in many states have repeatedly decided that the responsibility for the operation, and all connected with it, rests with the operating surgeon. It therefore follows that the anesthetist is of necessity an agent of the surgeon, and that it is impossible for the surgeon to reasonably transfer or slough his responsibility for this part of the operation onto any one else. I therefore believe that the development of the practice on the part of the surgeon of transferring wholly the responsibility for the choice and administration of the anesthetic to another person, tends definitely to diminish his breadth of vision, and to transfer him from the class of surgeon into the class of operator. . . . It is undoubtedly true that a certain number of trained medical men, particularly those qualified to advance the science of administration through experimentation, will be a very desirable addition to specialists in medicine, but that ordinary routine anesthetics can be best given by graduates in medicine is a proposition which I believe to be entirely unsound."—Hugh Cabot, Ann Arbor, Mich.

STATEMENTS OF HOSPITAL SUPERINTENDENTS

"We believe that the trained nurse who, after special training from six to twelve months under an expert anesthetist, demonstrates her proficiency and special adaptability, is entirely satisfactory and the best solution of the problem."—Johns Hopkins Hospital.

"We feel well satisfied with the specially trained nurse. Have had different nurses with the same result."—Presbyterian Hospital, Newark, N. J.

" . . . Women physicians soon seek other positions, and have given no better service than our trained graduate nurses. Our experience has extended over a period of six years."—Cook County Hospital, Chicago.

"The most satisfactory anesthetists are nurses specially trained under very competent instructors."—Sparrow Hospital, Lansing, Michigan.

"Nurses fully as good as doctors."—Buffalo General Hospital.

"A nurse who has made a specialty of anesthetics, and proves to be very reliable, is the safest."—North Chicago Hospital.

"I believe six months' experience for a graduate nurse in a clinic giving considerable numbers of

nitrous oxide-oxygen anesthetics, are necessary to sufficiently train a nurse to give this anesthesia."—Peter Bent Brigham Hospital, Boston.

"Registered nurses, regularly appointed certified anesthetists."—University Pennsylvania Hospital, Philadelphia.

"Specially trained nurse."—Presbyterian Hospital, Philadelphia.

"We employ two anesthetists (both graduate nurses) one of whom has been with us for seven years. Our internes are instructed in the administration of anesthetics by this anesthetist. . . . Well trained, carefully selected women, apparently possess all qualifications necessary for this work."—Englewood Hospital (E. T. Olson, Supt., Secretary Illinois Hosp. Association).

"We have trained and used several graduate nurses as anesthetists, and have found them very satisfactory."—Providence Hospital, Washington D. C.

"This Hospital retains three specially trained graduate nurses who give their entire time to anesthesia."—St. Joseph Hospital, Chicago.

"The carefully selected graduate nurse makes an ideal anesthetist."—F. A. Plum, M. D., Medical Supervisor Seattle City Hospital, Seattle, Wash.

"We have a graduate nurse. She gives a most satisfactory anesthetic, and is in demand by the surgeons."—Superintendent Homeopathic Hospital, Albany, N. Y.

"I think a trained nurse, given a course of training by a reliable anesthetist, is best. A doctor giving anesthetics is too apt to be interested in the operation rather than the patient."—Superintendent, Methodist Hospital, Philadelphia, Pa.

The President's Physician

Ohio has been again honored through the selection by President Harding of Dr. Charles E. Sawyer of Marion as his personal physician. Dr. Sawyer has been given the rank of brigadier general in the Medical Reserve Corps and called to active duty, to comply with the established custom of appointing a physician with military rank to this position.

Dr. Sawyer has had extensive experience in the field of organization and this should be helpful to him in connection with the investigation of federal health and welfare agencies which it has been announced he will undertake with a view of correlating their activities. During the recent war Dr. Sawyer served as a member of the medical branch of the Council for National Defense and took an active part in the organization of the Ohio Volunteer Medical Service Corps.

For five years Dr. Sawyer has been a member of the Ohio State Medical Board and is now president of that body. He is 61 years of age; a graduate of Cleveland University of Medicine and Surgery in 1881; a member of the Ohio State Medical Association and a former president of the American Homeopathic Society, and operates one of the largest private sanatoriums in Ohio.

A Voice from the Laity

Rev. John Collins Jackson, D. D., Portsmouth, Ohio

Editor of *The Ohio State Medical Journal*:

You have graciously opened to me your columns for a free expression of such opinions of the medical profession as I may find current among the thinking common people, of whom I am one. My contribution will be neither a panegyric nor a philippic, though partaking of each with the preponderance toward the former.

Your profession challenges my admiration, first of all, because of its antiquity, rivaling in time, if not surpassing, my own divine calling. For although religion, in its primary form, seems to have been contemporaneous with man's emergence from bruteness, the existence of disease, and its consequent reaction on the part of the animal creation, is even earlier. Fossiliferous remains indicate the work of the tuberculosis germ in the undated eons of the past. Then by that great primal law of self-preservation, the suffering creature, through that other mysterious law of nature, to which in our ignorance we can only give the name of "instinct," sought for and found some remedial agent. That was primitive *materia medica*. Man came to inherit both the cause and the cure from his animal ancestry. Hence your profession antedates intellect itself.

Like every other branch of science the healing art arose very slowly, and it yet has room for endless development. No wonder that quackery has always attended it. So has it been, and still is, in all other kinds of science. Superstition afforded the first forms of religious faith. Its barnacles still adhere to every school of dogmatic theology. Human limitations make this inevitable.

But I am not thereby appalled, nor do I hold the divinity of religion responsible for it. I remember that chemistry has alchemy for its father, and that astronomy was born of astrology. It behooves that none of us despise our progenitors, but that we prove ourselves worthy of our lineage by transmitting to our posterity a nobler inheritance. My point is that it ill becomes any doctor, to shy at religion because of its protean forms, and the surviving curios of belated theologies.

Next, I admire the altruistic sphere of the medical profession. "Health" says the Reverend Doctor Henry Van Dyke, "is spontaneous happiness." And, "the pursuit of happiness" is named in our American Declaration of Independence as one of the unalienable rights bequeathed to us by our Creator. Health—happiness is so inconstant and evanescent that the universal watchword of humanity is the daily, stereotyped inquiry, "How are you?" "How is your health?" We all pay our daily devotions to the goddess

Hygeia, at whose altars you doctors officiate. Your profession relates you to every individual of the whole human family, for in no way is it truer that "none of us liveth unto himself" than in the matter of public health, and its dependent happiness. Contagion and infection compel humanity to become each his brother's keeper.

By your arts of philanthropic prevention, worth always more than slow restoration, ounce for ton, you are doomed by the law of humanitarianism always to be fighting against your own financial interests. Who can do otherwise than admire true altruism? Was it this supreme ideal, translated into the life of the One who "went about doing good," that caused Him to appropriate to Himself the title of the Physician?

In the perfect state of society to which we aspire, "the inhabitants shall never say, 'I am sick.'" And then shall be fulfilled literally the rebuke administered to the self-righteous, by Him who bore our infirmities, and who heals our spiritual diseases, that "they who are whole need not the physician, but they that are sick." You are hastening the coming of that kingdom on earth, when "there shall be no more pain, and no more death."

I also admire the medical profession because of its mission of creation. It is yours to fill the public treasury by making 100 per cent. efficient citizens. Well did Benjamin Franklin say: "Public health is public wealth." My good friend, Doctor G. E. Robbins, commissioner of health of Chillicothe and Ross county, with his self-denying passion for service, is endeavoring to awaken the public mind to an appreciation of Franklin's priceless aphorism. His admirable article in your *Journal* of last November, entitled "*Our Unfortunate Country Cousins*," should be studied by every citizen. Every economist in the nation confirms his statements. But they fall too largely upon deaf ears. Retrenchment and conservation are just now popular political slogans, with a public burdened by taxation as never before.

But the ungainsayable facts which Doctor Robbins arrays,—from his own investigations, in advocacy of protecting the public health as public wealth, make a losing appeal to legislative bodies because of the slow showing on the credit side of the political ledger. Witness for example the pitiful minority protest put up against the present legislature's wise act in destroying the tubercular cows, whose milk was being sold to Ohio's public institutions. *Mammon against Man!* But that wail is indicative of the potency of the money appeal to an ignorant or avaricious electorate, found in every county of Ohio. It would cost something to equip each community against disease and death, and it is not outlay,

but income, which the sensitive, tax-ridden public most easily understands today. It is so much easier to make a show of economy by blinking at tubercular conditions, and refusing expenditures for health promotion, than to await the larger financial returns of prevention, due after the next bi-ennial election.

But this is nothing new. The "health-wealth" creative function of the medical profession, has always had a rocky road to travel. Yet the right need not be dismayed. A stupid public opposing itself will finally be disillusioned. The world moves slowly, but it does move. Everybody now knows that smallpox is preventable through vaccination and quarantine. But as late as 1871-1872, Philadelphia allowed an epidemic of this dreadful scourge to attack 25,000 of its citizens. Its monetary losses alone of all kinds, including the cash value of lives lost, and the care of the sick, reached the staggering total of \$24,000,000. Yet in the face of such startling statistics, which could then have been duplicated by some form of disease in every state of the Union, Ohio, even as late as 1884, had no State Board of Health.

In October, 1884, I was appointed for the first time to a pastorate in Portsmouth, Ohio. The universal custom here at that time was for people to fill their cisterns, in winter, with drinking water from the Ohio River. Typhoid fever is known to be a filth disease, nearly always caused by infected water. This malady had from time immemorial been taking its toll in suffering and death annually from this city. The doctors did what they could to get people to boil their drinking water. Some few did so; but the majority did not.

Twenty-one years later I returned for a second pastorate here, and found identically the same conditions prevailing. Typhoid deaths were very common. One family in my Church had lost two adult daughters from it in five years. I urged them to boil the water they drank. Argument proved useless; and the next year I conducted the funeral of their only other child, a rugged man of thirty years, from the same fatal malady. For six years now a modern sanitary filtration plant has given Portsmouth its drinking water, and the typhoid rates has fallen to almost zero.

How strange it will appear to future generations that many towns even in this year of grace, 1921, still drink from the sewage of all the river villages and cities above them. "The devil take the lowermost," would seem the accepted policy of river cities from the days of Coleridge till the recent past, despite his telling innuendo:

The river Rhine, as is well known,
Washes the city of Cologne—
But, O ye gods, and powers divine,
What then shall wash the river Rhine?

Edward Orton, LL.D., *clarum et venerabile nomen*, once president of the Ohio State Uni-

versity, whose fellowship I enjoyed for years as a neighbor in Columbus, in pleading for the creation of a State Board of Health, used these compelling comparisons: "Our legislators are not devoid of sensibility and thoughtful care for the creation. They have enacted a hawk law in the interests of young chickens, and turkeys, and sparrows. This is well, but would it not have been an equally worthy object to protect the nurslings of our homes from the destruction that wastes them at noonday? They are of more value than many sparrows.

"The Legislature has established a dog tax. The farmer may now sleep in peace, forgetful of his flocks that are wandering on the hills. If the dogs attack and destroy them in the darkness of the night, the State will make good their loss to him. But pestilence, too, walks abroad in the darkness, and 'there is no home, how well soe'er defended, but has one vacant chair.' Is not man better than a sheep?

"The law extends its care even to our rivers, that is, to protect the fishes in them from dragnets. If it had gone a step further, and had protected the fishes from extermination through the sewage defilement which our cities pour into the rivers, it would have, in so doing, protected us as well from the dragnet of typhoid and malaria. Perhaps when the birds of the air, the beasts of the field, and the fishes of the sea, are all duly protected, our legislators will turn their thought to the protection of human life and health."

This seems a mingled note of irony and discouragement; but reformers, which physicians and ministers essentially are, dare not lie down under the Juniper tree. The short view is the wrong view; the right view is the long view. Look a long way backward, and we see that truth is on the winning side, however slowly she may appear to be coming into her own. I hail you as allies in moral as well as physical reform; for moral error and evil, which I am called to combat, are primarily diseases of the mind, or body, or both. Let us, then, share together the humiliation which we feel when we see that medicine itself, as well as religion—or ecclesiasticism more properly, has often through prejudice and conservatism opposed its own progress.

Hippocrates who died in the year 357 B. C., "the father of medicine," sane and noble as he was, lived a thousand years in advance of his profession. Had his wisdom and scientific skill been adopted generally there is no one can estimate the blessing it would have been to the human race. Christianity cannot be held for the world's rejecting the legacy which Hippocrates bequeathed it prior to the third century. But with the incubus of superstition inherited from pagan nations, attributing disease to demons, witches and kindred causes, coming first onto ancient Israel, and then entailed through a false system of Biblical interpretation upon Christian-

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ity, after the latter had become the organized ecclesiastical and political power following the Emperor Constantine's conversion, we are obliged to blush, as professed disciples of the Great Physician, over every page of Church history till long after the great Reformation.

The highly revered St. Ambrose, who died 397 A. D., with the best of intentions could mistakenly say: "The precepts of medicine are contrary to celestial science, watching, and prayer"—a half truth, certainly, when these were relied on as curative agencies. From time to time through all the Middle Ages these words were quoted in opposition to progress in the healing art. But the medical side has also its regrets in this record. Even Galen, the able commentator on Hippocrates, who had made himself a great power in his science, in Rome, in the second century, A. D., by his dogmatism ably seconded the conservatism of ignorance and prejudice.

It was a minister,—no other than John Wesley, who can be credited to our relief for an aphorism which still powerfully makes for health through sanitation and disinfection,—"Cleanliness is next to godliness." But that was rank heresy for many Christian centuries. Personal filthiness was deemed humility and a badge of piety. Without referring to the habits of the stylites, and recluses—sparing ourselves the offensive verbiage necessary to describe their filth and squalor, St. Hilarion was eulogized by St. Jerome because he had spent his long life in utter physical uncleanness. St. Augustine glorifies St. Anthony in like manner because he had never washed his feet. It was the boast of St. Sylvia that she never washed any part of her body save her fingers.

These are only samples of the prevailing ideas which health reformers had to overcome in the early Christian centuries. Visitations of pestilence, which swept off the people like flies, were credited to evil spirits,—not to filth and vice. They were supposedly God's punishments for infractions of ecclesiastical customs. But plume not ourselves too highly, Oh, ye valiant Medicos, over my ancestral theologs, till I remind you of some of your scientific (?) data of those far-off years. Accepting the popular views, mingled with survivals of pagan superstitions, we find in the physiology and the anatomy of that era the doctrines that "the brain increases and decreases with the phases of the moon; the ebb and flow of human vitality with the tides of the ocean; the use of the lungs is to fan the heart; the function of the liver is the seat of love; and the spleen is the center of wit." Was religion responsible for these medical absurdities? Not maliciously so. The times required all educated men to be religious; non-conformity and heresy were taboo. But science was on no higher plane than was theology. The malign mixture of the two in their equal crudities manifested itself in such ways as this. The devil was the author of

disease, and it was therefore presumable that God would provide antidotes against his malignancy, and the inference was that nature's outward resemblances between bane and blessing were the divine order of cause and cure. "Hence it was held that blood-root, on account of its red juice, is good for the blood; liver root, having a leaf like the liver, cures diseases of the liver; eyebright, being marked with a spot like the eye, cures diseases of the eyes; celandine, having a yellow juice, cures jaundice; bugloss, resembling a snake's head, cures snakebite; red flannel, looking like blood, cures blood-taint, and therefore rheumatism; bear's grease, being taken from an animal thickly covered with hair, is a preventive of baldness."

Prescriptions were not so easily written in those days as the cryptic code today provides. Take the following, from a mediaeval medical work, in which theology and medicine marvelously mingle: "As a salve against nocturnal goblin visitors, take hop plant, wormwood, bishop-wort, lupine, ash-throat, henbane, hare-wort, viper's bugloss, heathberry plant, cropleek, garlic, grains of hedgerife, githrife, and fennel. Put these worts into a vessel, set them under the altar, sing over them nine masses, boil them in butter and sheep's grease, add much holy salt, strain through a cloth, throw the worts into running water. If any ill-tempting occur to a man—or an elf, or goblin night visitor comes, smear his body with this salve, and put it on his eyes, and cense him with incense, and sign him frequently with the sign of the cross. His condition will soon be better."

Such treatment ought either to cure or kill, and it is small difference which. So it has gone on through the centuries—nip and tuck between theology and medicine in conservatism. If theology has been dogmatic, medicine has been empiric: fifty-fifty! If religion still has its emotionalists, fanatical as the howling Dervishes of Egypt, do I not well remember when one of the best doctors drew a pint of blood from my feeble mother's arm? and another inserted a seton in a poor neighbor girl's neck, suffering from cerebro-spinal meningitis. But these are mild phillipics. Here are a few more with iron in them. It seems to a layman of the writer's humble caliber that the medical fraternity in general needs to be more fraternal; that the various schools need to recognize more distinctly in each other the special virtue or virtues which make each possible. For my own part, I see one or more things in each which I prefer to all the things, indiscriminately, in any one of them. So I am eclectic in my therapeutics, as in my theology. Whether it be the allopath, or the homeopath, or the hydropath, or the osteopath, or any of the other paths, which, like "the paths of glory, lead but to the grave,"—inevitably so because humanity is irresistibly headed that way,—whichever of the above seems most likely in my case to



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"get there," is, for the present at least, the one I want.

Why should doctors stand aloof from each other because they do the same thing in different ways? *Obstetrics*, for example. Our second child was born in Portsmouth. An epidemic of puerperal fever was prevailing. Several mothers in quick succession lost their lives. Two of these were among my wife's dearest friends, and I conducted their funerals, two days apart, from the Church just across the street from the parsonage. One of them was our family doctor's wife. He properly declined after that to take our near-at-hand accouchement. Then the second doctor whom I engaged lost a patient from the contagion; he, too, declined, of course. I next engaged a homeopath; but as the deaths continued he asked to be excused, on the ground that no other doctor here would consult with him, if he should need counsel in our case. By this time I was almost frantic, and could only marvel in silence at my wife's fortitude under the circumstances. Mercifully both mother and child came through the dreadful ordeal safely under the fourth doctor's skill. But I never could appreciate the refusal of these differing doctors to co-operate in such a case.

Why should they not depart from the straight and narrow practice of each one's special school, and adopt whatever proves good in any and all others? It has been their neglect to do this, that has left in my opinion, the open places through which so many cults come. I doubt if poor, old Doctor Quinby could have bequeathed to his ambitious pupil, Mrs. Eddy, the fad which she turned into a gold-mine, had there not been too much idolatry of drugs in the past, and too little recognition of the powers of the mind, especially in the treatment of nervous maladies. Likewise there is no question but that physical manipulation is often a more direct road to the lair where crouches the patient's hidden foe than powders or pills provide.

Then why not incorporate these things into your practice, frankly telling your patient why you substitute them for medicine? Why not recognize more distinctly in your prescriptions that time-honored trio, Dr. Diet, and Dr. Quiet, and Dr. Merryman? Psychotherapy seems to me to have a perfectly legitimate claim to existence from the same neglect on part of the orthodox practitioners. As a pastor visiting the sick, I have often seen a doctor come in and look at his patient, ask a question or two, then with solemn silence leave his remedies, and depart without a word of cheer. Why this mystic reticence? Maybe the doctor was worn to a frazzle by his too numerous calls; but it is certain that his patient would have profited by a little chatty banter, supplementing scientific skill. But long-faced parsons often lack the same "merry heart that doeth good like a medicine," and so I stop before you retort, "Physician, heal thyself!"

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OHIO HOSPITAL NOTES

A social service department has been established in connection with Mercy Hospital, Hamilton. Miss Helen Fitzpatrick, a registered nurse of Boston and for a number of years connected with the Massachusetts Charitable Eye and Ear Infirmary, is director of the new department. She will personally visit patients leaving the hospital to give follow-up advice and instruction where needed, thereby facilitating speedier and more complete recovery.

—Prof. Arthur E. Boycott and Dr. Charles C. Choyce, member of the faculty of the medical school, University College Hospital, London, England, touring America under the auspices of the Rockefeller foundation, were recent visitors at Cincinnati General Hospital and expressed great admiration for the equipment and operation of the institution.

—Negro doctors, ministers, nurses and laity members of the Cleveland Hospital Association have presented the Welfare Federation with two petitions for a hospital for negroes, to be known as the Lincoln Hospital and Nurses' Training School. An endowment fund of \$250,000 is sought

from the Community Fund. There are 21 negro physicians in Cleveland.

—Open house was held at the new McKinley Hospital, Columbus, February 28. The new hospital, of which Dr. F. F. Lawrence is chief of staff and surgeon, is prepared to care for 50 patients in single rooms, one of the features of the hospital being the absence of wards. There are two operating rooms, a completely furnished X-ray room, a diet kitchen on each floor and nurses' and help dining rooms. Miss Anna L. Madden of Springfield, Massachusetts, is superintendent of the hospital and principal of the training school for nurses.

—April 4, 5, 6 and 7 have been officially announced as the dates for a \$150,000 drive in behalf of Good Samaritan Hospital, Zanesville. The money will be used for the erection of an additional wing with facilities for 40 beds.

—Mercy Hospital, Canton, has added to its laboratory a department of radium therapy under the direction of Dr. C. M. Peters, and has purchased 50 milligrams of radium, valued at \$5,000.

—A bill authorizing the sale of the Marine Hospital, Cleveland, and the erection of a new hospital at a cost of \$400,000 was recently introduced in federal Congress.

—Good Samaritan Hospital, Sandusky, has

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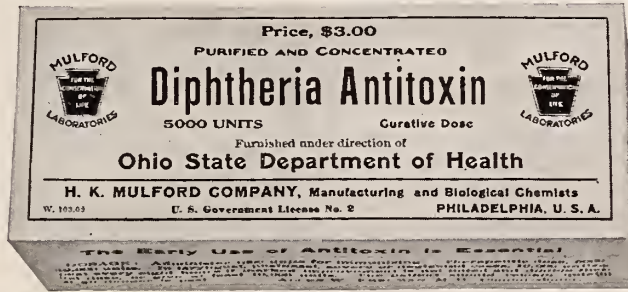
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purchased an adjoining residence property for use as a home for graduate nurses employed at the institution.

—The farm of the late O. C. Barber, millionaire match manufacturer, located near Barberton, has been under consideration by the United States Public Health Service, with a view to its adaptability as a site for one of the five large hospitals authorized by Congress for the care of disabled service men. It is said a tract of 120 acres of the 3,000 acre farm is ideally equipped for a hospital, and buildings erected at a cost of more than a half million dollars could be converted for hospital purposes at nominal cost.

—The United States Treasury is hastening plans to expand the 15 existing hospitals for the care of disabled war veterans and the erection of five new plants. Completion of the program will provide accommodations for the treatment of 30,000 patients, the daily average expected during the coming year. At present the government has about 10,000 beds of its own for the treatment of service men, and an additional 12,000 are cared for in private institutions. The five new hospitals will cost about \$2,500,000 each and three of them will contain 1,000 beds each, according to tentative plans. Consideration is now being given to sites for these institutions and a number of existing hospitals are under consideration for purchase by the government.

—Notwithstanding announcements early in the year to the effect that Akron Children's Hospital would be closed and the equipment transferred to the City Hospital, the city council has decided to continue the hospital as a separate institution. This decision was made after members of the staff, the trustees and directors appeared before the city dads and presented convincing reasons why the hospital should be maintained as before.

Medical Appointees to Administration Board

Drs. I. B. Harris of Columbus and E. M. Baehr of Cincinnati are the medical members of the new State Board of Administration which assumed supervision of Ohio's corrective, penal and charitable institutions late in February. Dr. Harris served as physician at the School for the Deaf under Ex-governor Harmon, and is at present assistant professor of clinical surgery at Ohio State University and chief of staff of St. Francis Hospital. Dr. Baehr is assistant professor of physiology and assistant clinical professor of nervous diseases at the University of Cincinnati Medical College and a member of the staff of Cincinnati General Hospital, from which positions he has secured indefinite leave of absence. Lay members of the board are E. C. Shaw, Akron, who has been elected chairman, and Marshall Sheppey, Toledo.

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Membership is restricted to practitioners or teachers in any branch of surgery who (a) are residents of Cincinnati or contiguous territory; (b) who are licensed members of the medical profession; (c) who belong to a county or state medical association; (d) who are either (1) fellows of the American College of Surgeons, or (2) who shall present to the satisfaction of the council qualifications equivalent to those required for fellowship in the American College of Surgeons; and (e) who shall comply with other requirements imposed by the by-laws.

Dr. Archibald I. Carson has been elected president of the college; Dr. Charles L. Bonifield, president-elect; Dr. Goodrich B. Rhodes, treasurer, and Dr. Charles T. Souther, secretary. In addition to the foregoing there is a council, of which Drs. Robert Carothers, E. O. Smith, C. A. L. Reed, Frank B. Cross and Charles E. Walton are members. It is the duty of the council, which is the governing body, to investigate and report, with recommendations upon all applications for membership; (b) to investigate and report upon all ethical questions that may be referred to it; (c) to have general supervision over the affairs of the college; (d) and to discharge such other duties as may be imposed upon it by the by-laws.

Commenting editorially on the organization of the college, the last issue of *The Cincinnati Journal of Medicine*, says it is an "event of importance in the medical annals not only of Cincinnati, but of this section of the United States. The surgeons of this city, as of every other leading city, represent not only the field of general surgery, but every special surgical practice. It is of the highest importance that these practitioners shall meet together for exchange of experience and thus give to each the benefit of the viewpoint of all the others. In this way both specialists and general surgeons will become beneficiaries of the association. But, over and above all this, it is in every way desirable that men engaged in a common calling shall know each other, respect each other, and in every way cultivate that cordiality of feeling which goes to make up a real *esprit du corps*. In this way alone can competition become modified by co-operation and rivalry become merged into emulation."

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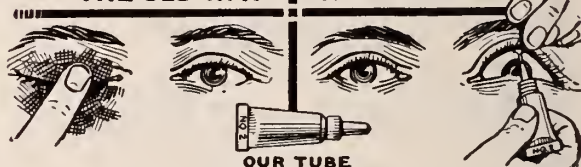
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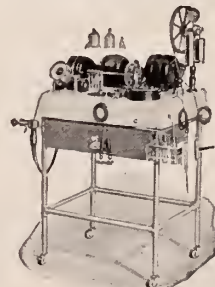
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BATTLE CREEK SANITARIUM

Council Gives Finishing Touches to State Meeting Program and Cares for Routine Matters

MINUTES

Council of the Ohio State Medical Association met in Columbus, March 6, 1921, with the following officers and members present: President Lukens, President-elect Teachnor, ex-President Baldwin, H. M. Platter, treasurer; Councilors Carothers, Ewing, Hendershott, Keller, March, McClellan, Headley and Goodman; Dr. J. H. J. Upham, chairman of the Committee on Public Policy and Legislation; Drs. Wm. E. Lower of Cleveland, and E. O. Smith of Cincinnati, members of the Committee on Anesthesia, and Executive Secretary Martin.

Detailed plans for the seventy-fifth annual meeting of the Association in Columbus, May 3, 4, and 5, including the program for the scientific sections, general sessions, entertainment and other features were submitted by Dr. Goodman, general chairman of the committee on arrangements. After a few modifications in the scientific section, the program and plans as submitted were approved by Council and ordered published in the April issue of *The Journal*.

A membership statement to date submitted by the executive secretary showed a total of 4043 members in good standing, with 745 of last

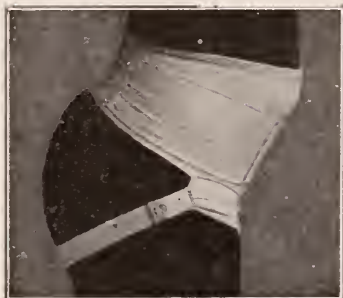
year's members delinquent at this time, the greater number of these being in the cities and larger county societies. Members of Council pledged cooperation with the secretaries of the constituent county societies in their respective districts in securing a full membership enrollment.

Dr. Baldwin, chairman of the Anesthesia Committee, authorized by Council some months ago, after completing a survey on the general subject of anesthesia, submitted the report of his committee to Council. Upon motion of Dr. Platter, properly seconded and carried, the report was received and placed on file. On motion of Dr. Goodman, seconded and carried, the committee was requested to continue as a special committee until the annual meeting. On motion of Dr. Goodman, seconded and carried, the report of the Anesthesia Committee was ordered to be published in the April issue *The Journal*. After a general discussion of the material contained in the report, on motion of Dr. Goodman, seconded and carried, the Committee on Public Policy and Legislation was instructed to continue its neutral position on the question of the present laws dealing with the administration of anesthesia.

A general report on the legislative proposals

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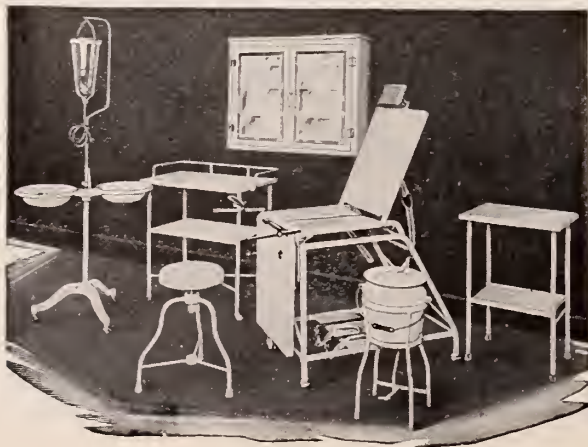


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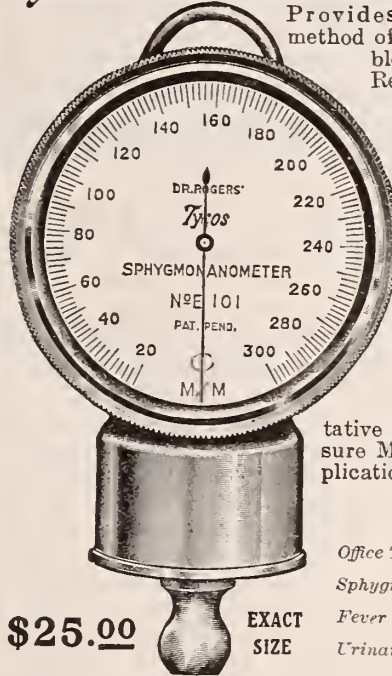
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in which the profession is interested, together with an account of the revival of the Ohio Public Health Federation through which medium the medical profession is cooperating with the women's clubs, druggists, dentists, nurses, veterinarians and others, was submitted by the Executive Secretary. Among other issues, the Council reaffirmed its position in opposition to a destruction of the administrative and executive functions of the Ohio State Medical Board, and expressed approval of the attitude of the Policy Committee in opposition to those sections of "Administrative Code," House Bill No. 249, recently introduced in the Ohio legislature.

Endorsement was reaffirmed on pending House Bill No. 133 (Wenner) dealing with a uniform system of physical education in the schools.

Opposition was expressed to Senate Bill No. 92 and 137, which would cripple the present health code. The action of the Policy Committee and its effort to clearly define the provisions of the pending occupational bill, H. B. No. 47, was approved. Opposition was expressed to pending House Bill No. 138, which would provide that all swimming pools and bathing beaches be equipped with lung motors or pulmotors. On the proposed hospital licensing bill, not yet introduced in the legislature, the Policy Committee was requested to cooperate with the Hospital Standardization Committee in ascertaining the sentiment of the profession on the bill. Approval was given to Senate Bill No. 57 to correct defects in the present law on fees for physicians in lunacy cases.

On motion by Dr. Goodman, seconded by Dr. Teachnor, and carried, Council expressed its unanimous confidence in and appreciation for the effective activity of the Committee on Public Policy and Legislation, and the excellent results made possible through the ready response and active cooperation of the auxiliary legislative committeemen in the various county societies.

A telegram was read explaining the absence of Dr. Updegraff, councilor from the Fifth District, stating that he has been ill with bronchial pneumonia. Council instructed the secretary to telegraph expressions of sympathy and best wishes to Dr. Updegraff.

A report on Medical Defense cases showed that during the last half of 1920 four suits in which the Association was conducting defense were favorably terminated for the defendant physicians; and January 1 found five suits previously referred to the Association still pending. Since January 1, five suits have been referred to the Association. Of this number, defense in two cases is being conducted by the Association; defense in two is being conducted by indemnity companies with the cooperation of the Association, and defense in one was withheld because of lapse of the physician's dues at the time the alleged cause of action occurred.

In the discussion which followed emphasis was placed on the necessity of prompt payment of

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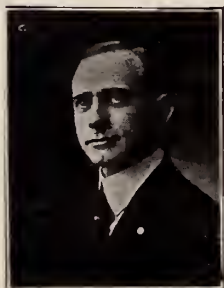
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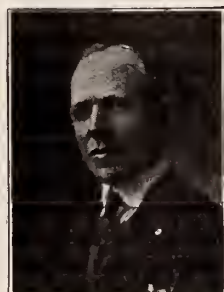
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membership dues, and of the necessity of complying with the rules and regulations of the Medical Defense Committee for X-ray plates in all fracture cases.

On motion, duly seconded, Council adjourned to meet Monday evening, May 2, in Columbus.

SYLVESTER J. GOODMAN,
Secretary of Council.

Ohioan Writes of Austria

Dr. Wells Teachnor of Columbus, president-elect of the State Association, recently received a most interesting letter from Dr. M. D. Godfrey, a Columbus physician who after lengthy military service is now engaged in post-graduate study at Wien, Austria. Not only Dr. Godfrey's Ohio friends, but others who have heard much of the deplorable conditions obtaining in Austria, will appreciate the following extract from his letter:

"I bade the army adieu New Year's Day after a very happy time on the Rhine, and came here to attend the clinics for six months or a year. Am having a wonderful lot of work to do and thoroughly enjoying every day. I am spending most of my time in Von Pirquets clinic but run over often to see Lorenz and others of fame. By the way, he tells me he is soon to visit America where he will be a guest at the wedding of Miss Armour in Chicago, so I guess you will all see him soon.

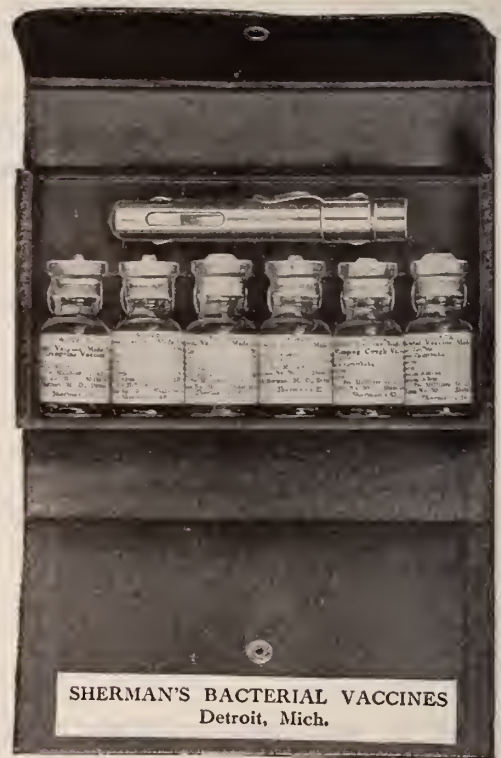
"Conditions generally are very bad in Austria now and were it not for the American Relief Association they would die off like rats. Expenses for Americans are very cheap, as we get seven hundred crowns or "Kronens B" for one American dollar.

"There are only a few American medicos here now, due, I think, to a misunderstanding of conditions here. Now is the time to come for an American is almost worshipped from all sides, and the clinics are simply overflowing in all departments."

Dr. Godfrey enclosed a news item from the Paris edition of *The New York Herald*, to the effect that Dr. James B. Brant of the medical college of Ohio State University had arrived in Paris en route to Rome, where he would lecture before a post-graduate class of Italian physicians. During the war Dr. Brant held the commission of major and was attached to the headquarters of the Second United States Army Corps.

TO CONTINUE WORK IN PANAMA

Dr. William C. Braisted, former surgeon general of the U. S. Navy and president of the American Medical Association, has gone to Panama to take up the sanitation work of the late Major General Gorgas. Dr. Braisted represented the United States medical department in Japan during the Russo-Japanese war. He is a native of Toledo.



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Societies	President	Secretary
First District G. D. Lummis, Middletown.....Eric Twachtman, Cincinnati.....		
Adams.....	Titus Stephenson, Winchester..	O. T. Sproull, West Union.....3d Wednesday in April, June, Aug., Oct.
Brown.....	R. B. Hannah, Georgetown.....	Geo. P. Tyler, Jr., Ripley.....4th Wednesday in Feb., May, and Nov.
Butler.....	James G. Grafft, Trenton.....	F. M. Fitton, Hamilton.....2d Wednesday, monthly
Clermont.....	A. D. Spence, Bethel.....	O. C. Davison, Bethel.....3d Wednesday, monthly
Clinton.....	F. A. Peele, Wilmington.....	Kelley Hale, Wilmington.....2d Thursday, monthly
Fayette.....	H. L. Stitt, Wash'gton C. H.....	Lucy Pine, Washington, C. H.....1st Thurs., March, June, Sept. Dec.
Hamilton.....	H. Kennon Dunham, Cin'nati.....	O. J. Seibert, Cincinnati.....Monday evening of each week
Highland.....	J. H. Frame, Highland.....	H. H. Lowe, Leesburg.....1st Wednesday in Jan., April, July, and Oct.
Warren.....	S. S. Stahl, Franklin.....	Herschel Fisher, Lebanon.....1st Tuesday in May, June, July, Sept., Oct. and Nov.
Second District.		
Champaign.....	David H. Moore, Urbana.....	J. F. Shultz, Urbana.....2d Thursday, monthly
Clark.....	William Ultes, Springfield.....	R. R. Richison, Springfield.....2d and 4th Monday each month
Darke.....	E. A. Fisher, Yorkshire.....	A. F. Sarver, Greenville.....2d Thursday each month
Greene.....	W. A. Galloway, Xenia.....	C. H. Denser, Xenia.....1st Thursday each month except July and August
Miami.....	J. B. Barker, Piqua.....	G. J. Hance, Troy.....1st Thursday each month
Montgomery.....	A. F. Shepherd, Dayton.....	R. C. Austin, Dayton.....1st and 3d Friday each month
Preble.....	W. H. Tucker, Eldorado.....	S. P. Carter, W. Manchester...3d Thursday, monthly
Shelby.....	A. W. Hobby, Sidney.....	V. W. LeMaster, Sidney.....1st Thursday, monthly
Third District.		
Allen.....	C. H. Clark, Lima.....	J. R. Tillotson, Lima.....1st and 3d Tuesdays
Auglaize.....	W. S. Stuckey, Wapakoneta.....	C. L. Mueller, Wapakoneta...3d Thursday, monthly
Hancock.....	W. J. Zopfi, Findlay.....	Nelia B. Kennedy, Findlay...1st Wednesday, monthly
Hardin.....	D. H. Bowman, Kenton.....	W. A. Belt, Kenton.....1st Thursday, monthly
Logan.....	F. B. Kaylor, Bellefontaine.....	M. L. Pratt, Bellefontaine...1st Friday, monthly
Marion.....	H. L. Uhler, Marion.....	J. A. Dodd, Marion.....1st Tuesday, monthly
Mercer.....	J. P. Symons, Rockford.....	D. H. Richardson, Celina.....2d Tuesday, monthly
Seneca.....	J. A. Gosling, Tiffin.....	E. H. Porter, Tiffin.....3d Thursday, monthly
Van Wert.....	C. G. Church, Van Wert.....	N. E. Leake, Van Wert.....2d and 4th Monday, monthly
Wyandot.....	Frederick Kenan, U. Sandusky..	B. A. Moloney, U. Sandusky...1st Thursday, monthly
Fourth District. (With Third District in Northwestern Ohio District) Tiffin, Oct. 26-27		
Defiance.....	W. S. Powell, Defiance.....	F. W. Watkins, Defiance.....2d Wednesday, bi-monthly
Fulton.....	W. L. Lathrop, Metamora.....	R. W. Reynolds, Fayette.....Semi-monthly
Henry.....	Charles Mowry, Napoleon.....	C. H. Skeen, Napoleon.....3d Wednesday, monthly
Lucas.....	L. A. Levison, Toledo.....	J. F. Wright, Toledo.....Friday, each week
Ottawa.....	A. A. Brindley, Pt. Clinton.....	S. T. Dromgold, Elmore.....2d Thursday, monthly
Paulding.....	Ray Mouser, Latty.....	R. J. Dillery, Paulding.....3d Wednesday, monthly
Putnam.....	P. D. Bixel, Pandora.....	H. A. Neiswander, Pandora...1st Thursday, monthly
Sandusky.....	E. W. Baker, Clyde.....	C. I. Kuntz, Fremont.....last Thursday, monthly
Williams.....	W. L. Hogue, Montpelier.....	J. A. Weitz, Montpelier.....2d Thursday, each month
Wood.....	J. W. Rae, Bowling Green.....	F. V. Boyle, Bowling Green...2d Thursday, monthly
Fifth District. (No District Society)		
Ashtabula.....	R. B. Wynkoop, Ashtabula.....	J. J. Hogan, Ashtabula.....2nd Tuesday, monthly
Cuyahoga.....	W. B. Chamberlin, Cleveland.....	Lester Taylor, Cleveland.....Every Friday evening
Erle.....	F. F. Lehman, Sandusky.....	H. N. Sarchett, Sandusky.....Last Thursday, monthly
Geauga.....	J. A. Heeley, Parkman.....	Isa Teed-Cramton, Burton...2d Thursday, Jan., March, July and Sept.
Huron.....	R. L. Morse, Norwalk.....	J. D. Coupland, Norwalk.....2d Thursday, monthly
Lake.....	V. H. Tuttle, Madison.....	E. S. Jones, Painesville.....1st Monday, monthly

Societies

President

Secretary

Lorain.....	J. R. Pipes, Avon Village.....	W. E. Hart, Elyria.....	2d Tuesday, monthly
Medina.....	M. F. Miller, Wadsworth.....	H. P. H. Robinson, Medina.....	3d Wednesday
Trumbull.....	Walter W. McKay, Warren.....	John D. Knox, Warren.....	3d Thursday monthly except June, July and August

Sixth District...

Ashland.....	C. C. Patton, Ashland.....	D. H. Mohn, Ashland.....	1st Tuesday, Jan., March, May, July, Sept., Nov.
Holmes.....	J. C. Elder, Nashville.....	A. T. Cole, Millersburg.....	1st Tuesday, monthly
Mahoning.....	W. E. Ranz, Youngstown.....	H. E. Patrick, Youngstown.....	3d Tuesday, monthly
Portage.....	S. U. Siron, Ravenna.....	E. H. Knowlton, Mantua.....	2d Thursday, monthly
Richland.....	G. C. Smith, Mansfield.....	Chas. R. Keller, Mansfield.....	3d Thursday, monthly
Stark.....	Perry King, Alliance.....	George S. Hackett, Canton.....	3rd Tuesday, Jan., March, May, July, Sept., Nov.
Summit.....	R. V. Luce, Akron.....	A. S. McCormick, Akron.....	1st Tuesday, monthly
Wayne.....	O. P. Ulrich, Orrville.....	Fred Snyder, Orrville.....	2d Tuesday, Jan., April, July, Oct.

Seventh District

Belmont.....	R. H. Wilson, Martins Ferry.....	J. S. McClellan, Bellaire.....	2d Wednesday, monthly, at 1:45 p. m.
Carroll.....			
Columbiana.....	P. C. Hartford, E. Palestine.....	C. R. Larkin, East Liverpool.....	2d Tuesday, monthly, alter- nately, in Lisbon, Salem and E. Liverpool
Coshocton.....	D. Edmund Cone, Coshocton.....	J. D. Lower, Coshocton.....	4th Thursday, April, June, Sept., Dec.
Harrison.....	H. I. Heavilin, Cadiz.....	R. P. Rusk, Cadiz.....	1st Wednesday, monthly
Jefferson.....	V. B. Di Loreto, Steubenville.....	J. R. Mossgrove, Steubenville.....	2d Tuesday, monthly
Monroe.....		J. H. Pugh, Woodsfield.....	2d Wednesday, monthly
Tuscarawas.....	A. C. Dempster, Uhrichsville.....	P. J. Alspaugh, N. Philadelphia.....	1st Tuesday, monthly

Eighth District.

Athens.....	W. S. Rhodes, Nelsonville.....	T. A. Copeland, Athens.....	1st Tuesday, monthly
Fairfield.....	Ralph Smith, Lancaster.....	R. W. Mondhank, Lancaster.....	2d and 4th Tuesday, monthly
Guernsey.....	C. A. Moore, Cambridge.....	F. M. Mitchell, Cambridge.....	1st and 3d Tuesday each month
Licking.....	Carl Evans, Newark.....	W. E. Shrontz, Newark.....	Last Thursday, monthly
Morgan.....	C. V. Davis, Pennsville.....	D. G. Ralston, McConnelsville.....	1st Wednesday, monthly
Muskingum.....	C. U. Hanna, Zanesville.....	Maurice Loebell, Zanesville.....	1st Wednesday, monthly
Noble.....	G. H. Zimmerman, Belle Valley.....	J. L. Gray, Caldwell.....	1st Thursday, monthly
Perry.....	J. C. Sommers, Somerset.....	C. B. McDougal, N. Lexington.....	3d Thursday, monthly
Washington.....	E. W. Hill, Jr., Marietta.....	A. G. Sturgiss, Marietta.....	2d Wednesday, monthly

Ninth District...

Gallia.....	C. G. Parker, Gallipolis.....	Milo Wilson, Gallipolis.....	1st Wednesday, monthly
Hocking.....	O. V. Donaldson, Gore.....	M. H. Cherrington, Logan.....	
Jackson.....	A. G. Ray, Jackson.....	R. W. Caldwell, Jackson.....	1st Tuesday, monthly
Lawrence.....	O. H. Henninger, Ironton.....	E. E. Ellsworth, Ironton.....	1st Thursday, monthly
Melgs.....	P. A. Jividen, Rutland.....	L. A. Thomas, Middleport.....	1st Wednesday, April, July and Oct.
Pike.....	F. C. Metzger, Waverly.....	L. E. Wills, Waverly.....	1st Monday, monthly
Scioto.....	Tunis Nunemaker, Portsmouth.....	Harry Rapp, Portsmouth.....	2d Monday, monthly
Vinton.....	O. S. Cox, McArthur.....	H. S. James, McArthur.....	4th Wednesday, monthly

Tenth District...

Crawford.....	R. J. Caton, Bucyrus.....	H. S. McClure, Bucyrus.....	2d Thursday, monthly
Delaware.....	I. T. McCarty, Delaware.....	Rees Philpott, Delaware.....	1st Friday, each month
Franklin.....	G. C. Schaeffer, Columbus.....	James A. Beer, Columbus.....	1st four Mondays
Knox.....	H. W. Blair, Mt. Vernon.....	C. D. Conard, Mt. Vernon.....	2d and 4th Wednesday, from March to middle of Dec.
Madison.....	L. E. Evans, West Jefferson.....	H. V. Christopher, London.....	4th Thursday
Morrow.....	R. L. Pierce, Mt. Gilead.....	Todd Caris, Mt. Gilead.....	1st Wednesday, monthly
Pickaway.....	J. B. May, New Holland.....	D. V. Courtright, Circleville.....	1st Friday, monthly
Ross.....	G. E. Robbins, Chillicothe.....	G. S. Mytinger, Chillicothe.....	1st Tuesday, monthly
Union.....	C. O. Thompson, Raymond.....	E. J. Marsh, Broadway.....	2d Tuesday

NEWS NOTES OF OHIO

Sandusky—Dr. H. D. Peterson has returned to his home here after spending the winter in San Diego, California.

Columbus—Dr. Casper H. Benson has been appointed attending tuberculosis specialist for the United States Public Health Service.

Barberton—This city is distinguished by having the first Hospital Company Medical Corps in the state. Among officers commissioned in the new corps are Drs. H. A. Rodenbaugh as major; C. H. Irish, G. E. Gardner and James Wright, as captains.

Cincinnati—Dr. Henry Stow Garlick, formerly a resident of this city with offices in Garfield Place, died at his home in Laredo, Texas, recently.

Springfield—Dr. L. L. Syman suffered severe bruises about the head recently when he was attacked by thugs as he left the home of a patient.

Toledo—The death of Mrs. Ruth J. Douglass, wife of Dr. F. M. Douglass and sister of the late Dr. Julius Jacobson, occurred at her home here, February 22.

Hamden—Dr. W. H. Henry, Major, M. R. C., for many years a resident of this village, is now serving with the air service as post surgeon at McCook Field, Dayton.

Cincinnati—Dr. C. P. McCord of the Department of Industrial Medicine, University of Cincinnati, addressed a recent meeting of the local division of the National Safety Council, attended by factory foremen and executives.

Canton—Robert D. Landor of this city, a senior at McGill Medical College, Montreal, died March 1 from Bright's disease.

McClure—Dr. C. E. Burgett, for ten years a practitioner of this city, has removed to Dayton, where he has opened offices for general practice.

Wooster—Early in March Dr. John G. Wishard was being mentioned among those under consideration by President Harding for the Persian ambassadorship. From 1889 to 1909 Dr. Wishard was a medical missionary in that country, where he became consulting physician to Muzza-Ed-Din, the Shah, and established the American Presbyterian Hospital at Teheran. He is the author of a book entitled "Twenty Years in Persia."

Canton—In an address on "The Practice of Medicine as a Profession" before the Science Club of McKinley High School, recently, Dr. George Hackett declared the three essentials of success to be sane application, grit and devotion.

Cleveland—Dr. J. Edgar Fisher has opened offices in the 71st Street Euclid Building, with practice limited to dermatology, syphilology, X-ray and radium therapy.

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For spastic-pains of the abdominal viscera, for spastic respiratory and spastic circulatory derangements, including angina-spasms and arterial hypertension.

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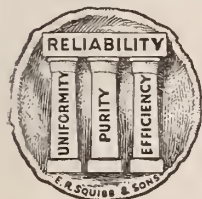
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Climate means nothing in the treatment of pulmonary tuberculosis, so why send your patients west? The climate in Ohio is as good as any. The cardinal points of REST, FRESH AIR, PROPER FOOD, AND REGULATED EXERCISE is the method of treatment used.

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Success in the treatment depends upon the stage of the disease at which the patient is admitted to the institution. The sanatorium acts as a "school" where patients are taught to live properly and to protect others. They also learn the value of rest. By giving your patient a short period of "schooling" he will be better prepared to follow instructions and will have increased his chances of arrestment of his disease.

When in doubt as to diagnosis, we will admit the case for observation and report.

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ARTIFICIAL PNEUMOTHORAX TREATMENT AND TUBERCULIN WHEN INDICATED.

RATES, \$28.00 per week, which includes everything except an X-ray examination, which is made on admission.

Descriptive circular and other information on request.

Inquire of

DR. LOUIS MARK, Medical Director, Rocky Glen Sanatorium, McConnellsville, Ohio

Ohio State Medical Journal

Published monthly by
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Next Annual Meeting May 3-5, Columbus

EDITORIAL COMMENT

by D. K. M.

Columbus Calls!

Chris Columbus is all set to greet you with his famous smile and a cordial hand of welcome on May 3, 4 and 5, the dates of the seventy-fifth annual meeting of the State Association. He will be assisted in this function by a large and capable committee from the Columbus Academy of Medicine which has completed plans to make this meeting the most profitable and enjoyable in the history of the Association. It's up to the members of the Association to show their appreciation by being on hand for the first session on Tuesday, May 3.

Details of the program were published in the last issue, but just to freshen the memory—the party will start with an opening general session at ten o'clock on Tuesday, which will be featured by President Lukens' address and addresses of welcome on behalf of the city of Columbus and the local academy of medicine. This will be followed by the first session of the House of Delegates at eleven. In the afternoon the seven scientific sessions will convene at two o'clock, and in the evening there will be the annual smoker for the men, and a complimentary dinner and theatre party for women physicians. A complete day, you will agree.

Wednesday's program will start at nine o'clock with sessions of the scientific sections; followed by numerous luncheons at the noon hour; the second general session in the afternoon featured by orations by Drs. Reuben Peterson of the University of Michigan and Dr. J. Rilus Eastman of the University of Indiana, and closing with the annual banquet in the evening.

Thursday morning will be occupied by the joint session of the scientific sections with the program devoted to a symposium on fractures from the medical, surgical and legal viewpoints. Mr. Leroy Eastman, of the firm of Smith, Baker, Effler, Allen and Eastman of Toledo, general counsel for the State Association's medical defense, will discuss the legal phases. The Franklin County Bar Association has been invited to hear this symposium, and physicians may bring their friends from the legal profession who are interested. On this morning there will also be an eye clinic by Lieutenant-Colonel Henry Smith of India, under the auspices of the Eye, Ear, Nose and Throat Section.

Changes in State Meeting Program

Since publication of the annual meeting program in the April issue of *The Journal* some slight changes and a few additions have been made.

Because of the inability of Dr. George W. Crile of Cleveland to be present on the second

day of the meeting, his paper on "Ulcer and Cancer of the Stomach and Duodenum," originally scheduled for the second session of the Surgical Section, has been transferred to the first session on the afternoon of Tuesday, May 3, when it will be read as the third paper on the program.

Two papers have been added to the program of the Section on Obstetrics and Pediatrics. "Incidents and Mortality of Congenital Syphilis at the Babies' Dispensary of Cleveland" by Dr.

Bring Your Card!

Don't forget to bring your membership card to the annual meeting. This little precaution on your part will save annoying delay in verifying your membership standing and prevent congestion at the registration desk during rush hours. Presentation of the little blue card showing your 1921 dues have been paid will enable you to register without question. If you are unable to produce it, your name will have to be looked up on the books before you are permitted to register and receive a badge, and meanwhile the fellow back of you will be saying, or at least thinking * * * * something.

C. W. Burhans of Cleveland, has been scheduled for the Tuesday, May 3, session; and "The Management of the Third Stage of Labor" by Dr. Walter E. Duffee of Columbus, for Wednesday, May 4.

TO WOMEN PHYSICIANS

All women physicians in attendance at the annual meeting of the State Association, who will notify Dr. Grace Welch, 944 E. Long Street, Columbus, before April 28 of their intention to be present, are cordially invited to be the guests of the Association at dinner, Tuesday evening, May 3, at 6:30 p.m. at The Maramor, 112 East Broad Street. Following the dinner the Women's Medical Club of Columbus will entertain the women physicians at a theater party. That proper arrangements may be made, notification of acceptance of this invitation should be sent to Dr. Welch as this will be the only official notice of this special event.

NOTICE TO RUSH ALUMNI

Dr. G. W. Dunlap of Toledo, secretary of the Rush Medical Alumni Association of Ohio, announces that there will be a meeting and luncheon of the alumni at Columbus during the state meeting. He requests members to be on the watch for a poster giving the time and place of this event in Columbus.

ATTENTION EX-SERVICE MEN

There will be a meeting of medical ex-service men of Ohio in the Ball Room of the Elk's Home,

Tuesday, May 3, at 7:30 p. m., immediately preceding the annual smoker which will be held in the same room. Dr. Charles T. Hunt of Miamisburg, president of the medical ex-service men, requests a good attendance to "make it snappy."

Golfers Get An Early Start

Oh you golfers! The summer green are open! The robins, meadow larks and flowers are with us again. Attend your State Association annual meeting and bring along your golf sticks. A day's relaxation on the Scioto will sharpen your mind for the papers to come later in the week. The tournament will begin at 9:00 a.m., May 2, lasting all day—36 holes. A good dinner will be served in the evening after which the prizes will be distributed to the winners.

Send in your name to Dr. Earl Gaver, 71 Winner Avenue, Columbus, who will forward you an application blank. Make up your handicap from your five best scores of last year; give us the par and length of your home course. The handicap committee will do the rest. Handicaps must be filed by April 30.

Besides the trophies listed appropriate prizes will be given for the second and third best scores

Special Luncheons

In compliment to Lieutenant-Colonel Henry Smith of India, the foreign guest of the coming annual meeting, the Eye, Ear, Nose and Throat Section will give two luncheons during the meeting which will be open to all members of the Association and medical guests. The first will be held on Wednesday, May 4, in the ball room of the Hotel Deshler at twelve o'clock, immediately following the session of the Eye, Ear, Nose and Throat Section before which Lieutenant-Colonel Smith will deliver the Oration on Ophthalmology. The second luncheon will be held in the same place and at the same hour on Thursday, May 5, following Dr. Smith's clinic. Physicians desiring to attend either one or both of these luncheons are requested to advise Dr. Andrew Timberman, Citizens Trust Building, Columbus, who is in charge of arrangements for this entertainment, in advance in order that proper reservations may be made. There will be a reasonable charge per plate.

in each event. There will also be a "booby" prize for the poorest score. Below you will find a list of the officers of The Ohio Medical Golfing Association, together with the by-laws.

Directors: Drs. J. J. Coons, president; F. D. Barker, vice-president; Earl Gaver, secretary-treasurer. Tournament Committee: Drs. J. J. Coons, Earl Gaver, Charles Hoffhine and Halbert Blakey, Columbus. Handicap Committee: Drs.

Charles Hoffhine, Columbus; R. H. Birge, Cleveland; T. Hubbard, Toledo; A. B. Thrasher, Cincinnati; H. H. Hatcher, Dayton; Ralph Holmes, Chillicothe.

NAME:—The name of this Association shall be The Ohio Medical Golfing Association.

EXECUTIVE:—The organization shall be governed by Three Directors, who shall be chosen by the fellows of the Association at each Annual Meeting. They shall hold office until their successors are elected and qualify. They shall be known as President, Vice-President and Secretary Treasurer, respectively, and their duties shall be such as usually pertain to their respective offices. The three last retiring presidents of the Association shall constitute an Advisory Council for the Association.

FUNDS:—To provide funds for administration and for advancement on tournament expenses, the following dues are required:—

1st. An Enrollment Fee of \$2.00 for the general funds of the Association to be paid upon enrollment as a fellow of the Association. This may be at any time. The payment of this perpetuates the membership. Once a member, always a member.

2nd. A Playing Fee of \$1.00 for the Tournament Fund of the Association. This fee, and all hereafter are payable at the first tee and shall be paid only in the event that the member enters the tournament; the idea being that aside from the enrollment fee, all expenses are paid by those who participate in any year.

3rd. The Tournament Fees:—There shall be paid then, at the first tee, by all entrants to the tournament, fees as follows:

(a) The Enrollment Fee of \$2.00 above mentioned, if not already a fellow.

(b) The Playing Fee of \$1.00 above mentioned.

(c) The Green's Fee, charged by the local club as arranged for by the local committee.

(d) The Dinner Fee, as determined by the local committee in charge.

MEMBERSHIP:—Any male Fellow of the Ohio Medical Society in good standing, who has the degree of M. D., becomes automatically a fellow of this Association upon acceptance of its By-Laws and payment of the enrollment fee.

PLAY:—No fellow shall enter play except upon payment of the prescribed fees.

THE TOURNAMENT shall be held either just before or during, or just after the Annual Meeting of the Ohio State Medical Society; the time and place to be determined in advance by the Directors co-operating with a local committee of their own choosing; provided that the time shall not be in conflict with the scientific programs of the Ohio State Medical Society.

THE ANNUAL DINNER AND MEETING shall be held on the evening of the day of the tournament.

ACCOUNTS:—No accounts shall be kept with the fellows. All privileges automatically follow compliance with the provisions of the By-Laws.

AMENDMENTS:—These By-Laws may be amended at any Annual Meeting by a three-quarter vote of the fellows present; or between meetings by a three-quarter vote of the members who register their votes by mail within two weeks after a call therefor is made.

"Science and Health"

In view of the recent overwhelming defeat of the Christian Science bill in the legislature, and with the fair assumption that the majority of the members of the House of Representatives were sufficiently conversant with the vicious fallacies contained in this particular bill, the comment on Christian Science contained in a recent comprehensive paper on the subject of "The Medical Profession and The Public" by Dr. William J. Mayo, read at the opening of the Cleveland Clinic a few weeks ago, is of timely interest:

"Christian science has capitalized and commercialized the mentally healing virtues of Christianity. Among all peoples in all times the prevailing religion has been successful in relieving sickness so far as mental suggestion could give comfort or indirectly affect the physical condition. To comfort the sick and those afflicted mentally as well as physically has been the great function of religion, and we see this effect in all its variations, from the cheering up of the down-

cast to the production of the hypnotic state. The great opportunity of Christianity lies in the moral, mental and physical misfortunes of man. I venture to say that people of this generation have not had the comforts of religion received by people of earlier generations. Religion is no longer such a potent force in the sickroom; I would not presume to say that too much time has been put on the state to come, but there appears to be a distinct loss of relation to the state of the living. In this field, so sadly neglected by the Protestant churches, Christian science, while wholly devoid of science, at least brings the comfort of religion to bear on a great number of human misfortunes. If Christian science would confine itself to mental and functional disturbances of man it might do more good and less harm. The very absurdity of the book "Science and Health" has aided, perhaps, in obtaining effect; possibly one might say that the unstable type of mind nowhere better expresses itself than in the book, "Science and Health," in which an appeal is made to similar minds of persons similarly situated. Gazing at the pages of this book apparently has the same effect on the reader that gazing on the crystal ball has on the subject of the hypnotist. Not all persons have sufficient imagination to accept the Christian science jumble. It takes real imagination to reach a hand into the air, bring it down empty and say, 'See what I have in my empty hand.'

"It is said that the Chinaman and the East Indian worship wooden images. But they do not. To them the images are emblematic, and they need these physical emblems to bring the mind to bear on the religious side. Religious forms and ceremonials aid in impressing on the mind eternal truths. For special lacking in imagination, and to whom Christian science cannot appeal, there are a host of other cults in which sufficient of the physical is present to give body to mental effect."

"Prohibition Prescriptions"

With the primary purpose of preventing the sale, manufacture or prescribing of beer for medicinal purposes in Ohio, the McCoy Senate Bill No. 178 has been the basis for the latest enactment in Ohio directly concerned with the limiting of intoxicants for medicinal purposes.

The medical profession has been thoroughly consistent in its policy of adhering to the principles of prohibition, and to promoting its advancement. The latest Ohio prohibition measure, however, as originally drawn would have had the effect of compelling Ohio physicians to secure federal liquor permits in order to prescribe any drugs containing alcohol. As only approximately one-fifth of the physicians of Ohio hold federal permits, this proposed provision would have resulted in an unreasonable restriction on legitimate medical practice.

As later amended, Senate Bill No. 178 limits to pure grain alcohol and those nineteen pharmacopoeial preparations that are listed by the prohibition commissioner as possible for use as intoxicating liquors—the preparations of an intoxicating nature which may be prescribed and for which a federal permit is necessary.

In other words, pure grain alcohol and these special preparations without further "medication" may be prescribed only by physicians holding federal permits and on prescription blanks provided for that purpose. This in effect is the present federal regulation. The new bill, however, makes it impossible to prescribe whiskey, brandy, wine or beer.

The nineteen preparations which have been listed by the federal prohibition commissioner for the prescribing of which, without additional medication, a physician must hold a federal permit are aromatic elixir, elixir licorice, comp. spirits juniper, comp. tincture cardamon, comp. tr. lavender, elixir anise, red aromatic elixir, elixir bitter orange, aromatic tincture, comp. elix. cardamon, comp. elix. taraxacum, tincture caramel, comp. wine orange, wine wild cherry, bitter tincture, aromatic elixir licorice, blackberry cordial, bay rum, and tincture Jamaica ginger.

A further ruling of the prohibition commissioner, effective June 1, will add four other preparations to this list. They are wine of beef, wine of pepsin, elixir terpin hydrate, spirits of ether or Hoffman's anodyne.

The above list of preparations, however, may continue to be prescribed by physicians without federal permits provided they are medicated in such a manner that each fluid ounce contains a dose as a whole of some U. S. P. drug.

On account of the great amount of discussion on the general subject of medicinal preparations, liquor permits, and prohibition prescriptions, the following extract from a statement recently issued by Theodore Wetterstroem, secretary of the Ohio State Pharmaceutical Association, is of interest:

The argument against beer and wine can not be advanced on the same grounds as the objections against distilled alcoholic spirits. Wine and beer are natural products while distilled spirits are artificial products.

We are told that whatever medical properties there are in beer and wine can be obtained in the dealcoholized or unfermented body. Science has not so far been able to give us a product that is free from the odors and tastes that cling to the product during processing. There is a certain repugnance against boiled coffee; against condensed milk; against canned foods; against dried fruit; against boiled cider; against near beer, or against any product that has been subjected to continuous heat and thus breaking down the ferment or its product. The presence or absence of alcohol in the boiled product has nothing to do with its palatability. Besides the stomach craves for something that is natural and not produced by artificial means. The process of digestion is one of fermentation.

Carbohydrates or starchy food is inoculated with the ptyalin of the saliva and started on the road to fermentation. The heat of the body, the moisture and even the acidity of the stomach all play important parts in converting this starchy food into a form that can be assimilated into the system. This conversion and the production of carbon dioxide are evidences that alcohol is produced in the stomach in small amounts. It is therefore this animal instinct that craves for something that is a part of the function of life. Animals have this instinct to a greater extent than the human being, for if left alone they follow this craving and eat the right food and do the right thing to keep up this process of assimilation and elimination. What made Kentucky the happy hunting ground for the Indian? It was the salt in the springs of Kentucky that drew the buffalo and other animals long distances and became his prey. Even today the name of Licking has been handed down to us as evidence of the licking kine. The dog wants its blade of grass. The cat its catnip. The ostrich its pebble. All illustrations of nature's aid to keep up this assimilation and elimination so necessary to function life.

This desire for something that is part of life's function therefore can not be denied, and the only limitation that should be placed upon this animal craving would be as to the ratio of that amount that can be agreeable, acceptable or assimilative. We know that milk when fermented will produce about two per cent. of alcohol; that apple juice will produce about six per cent. alcohol; that grape juice will produce about eight to twelve per cent. alcohol; malted grain will produce about four per cent. alcohol. These are all natural products and when you attempt to change these by artificial means something happens that does not set well on the stomach. It is true that grape juice can be kept in the unfermented state, but to keep it that way requires processing in some manner or some sugar added. Why give grape juice in febrile cases when we know that the grape juice will ferment and produce increased temperature. Why not give it in the form that can be assimilated direct? Besides in such cases the animal craving is for something sour and free from sugar. It is as true today as it ever was that wine is fit for the aged and infirm. Why deny this? Follow the rules laid down by nature and you can not go far wrong.

There is no argument for ardent distilled spirits except the alcohol contained therein. The difference between diluted alcohol and whiskey is the flavor obtained from the fused oil in whiskey. This is only one-fifth of one per cent. and has no medicinal value. It is therefore the flavor that makes whiskey a beverage and its absence a medicine.

As for wine and beer it appears that the only way that our government and state can stop the filth that goes with their use is to stop their manufacture and sale. This would be more true of beer than of wine.

What Could You Expect?

At an old-fashioned spelling match held in connection with a social session of the Canton Medical Library Association, Dr. E. J. March, councilor of the Sixth District of the State Association, was the last man to take his seat. He went down on "hexamethylenetetramin." We don't blame him for this shortcoming but congratulate him for surviving to try it.

The Special Field of Neurological Surgery After Another Interval*

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Editor's Note.—Dr. Cushing has herewith written his Apologies, and it is not only most instructive, but it holds out many thoughts that should have been driven home to the profession long before this. If after such a career as his own Dr. Cushing deems it essential for the neuro-surgeon of the future, if he is really to do justice to his specialty, to have a far better grounding in clinical neurology and psychiatry than was accorded his predecessors, it is high time that such specialists be given the peculiar opportunities for diagnostic and surgical training that are required for success, but are not now available. Dr. Cushing, therefore, looks forward hopefully to the day when a National Institute of Neurology will provide the all-around training which is essential to the future of neurological surgery as a specialty. Just as Dr. MacKenzie sees in General Medicine the future hope of the profession, so also Dr. Cushing is anxious that neurologic surgery may never become estranged from General Medicine and Surgery. It is only given to a few to have mastered their work as to be able to adjudge it in their own life-time and from their own experience. The lessons Dr. Cushing emphasizes are those he has learned in the trying school of his own clinic and laboratory and he shows remarkable discretion and modesty in handing them down to others for what they are worth.

THOSE engaged in scientific or professional pursuits have need of a periodical accounting of stock no less than those engaged in business. The results of such an inventory may sometimes be of more than personal interest, especially when projects have been undertaken which are in a measure novel or special, for their success or failure may encourage others or may deter them from similar adventures.

SPECIALIZATION IN GENERAL

In a sense, I suppose, every medical graduate tends in time to particularize to a certain extent, and through liking or opportunity comes to be known as more expert or better informed than his fellows in one thing or another. He may have had an unusual experience in relation to child-birth, shown unusual skill in dealing with the ailments of children or with the maladies to which their mothers are heir. He may have a mechanical bent and be particularly apt as a setter of broken bones or a corrector of deformities. He may be a particularly good microscopist or show greater facility than his contemporaries in the use of some other precise instrument of importance in diagnosis. He may have become engrossed in some special disease, indeed of some particular organ, or what is more, of some special form of treatment for a particular disease of a particular organ. His interests may become purely scientific or purely sociological and take him away from the bedside entirely. Of all this there is no end or ever will be. For there are ways innumerable in science or practice in which we as individuals or groups of individuals come to particularize in our work.

The participant in this subtle process of specialization may not always be conscious of

it, or, if he is conscious of it, may not wish to admit the fact even to himself, and would encourage his employers, be they trustees, patients or the commonwealth, to believe that he is equally capable of dealing with all branches of his larger subject. On the other hand, the concentration of effort may be intentional and represent a desire to contribute to knowledge, rather than income, though they are not necessarily divorced, and for this the individual must perfect himself in certain directions rather than others.

Thus the specialist and specialties arise, but in the case of each of them, should progress cease after a generation or two, it is inevitable that the imitators of the pioneers will diminish in number as well as quality. And when this time comes, following a period of more or less disrepute, the particular species of specialist dies out, and the prodigal specialty returns to, or should return to, its parents. If this happens, the reunited household will unquestionably have profited by the episode.

Medicine has grown in the fashion of a banian tree. In the beginning there was a single stem. This, in the remote past, each professional aspirant learned to climb, and in his lifetime could encompass without difficulty all the knowledge its various branches represented. But from the main branches which the original tree put out, particularly from physic and surgery representing the application of medical knowledge to practice, there soon dangled many roots. Some of these finally reaching the ground became attached, and drawing up their own nourishment have in some cases enlarged and become permanent and necessary supports to the parent branches.

Modern aspirants sometimes climb these outlying props, mistaking them for the main stem or believing that they have found a short and less crowded way to the top where others they

*An Address given before the Tri-State District Medical Society, at Waterloo, Iowa, October 7, 1920, and the Cleveland Academy of Medicine, October 8, 1920.

wish to emulate are seen to perch. The temptation is great and to some irresistible, but short cuts to specialization without thorough preparation in the fundamentals make incompetent if not dangerous practitioners, and so long as this is permitted within the profession itself we should be less intolerant of those who have smuggled themselves into the tree with no medical preparation whatsoever—the osteopath perched insecurely on a limb propped by massage and the Christian scientist tip-toe on another feebly supported by psychotherapy.

Be this as it may, in time there has come to be a veritable grove of trunks, and every season new roots become grounded in such increasing numbers that it is difficult for the untutored to realize that the growth really represents a single tree. To be sure, an outlying prop to a limb may occasionally dwindle and disappear as botany has disappeared; or, after a period of temporary vigor, it may become incorporated with an adjacent and more vigorous one, but the general tendency is for a further and rapid multiplication rather than for any reduction in number, for, though no longer needed, an old prop dies reluctantly if once it has come to support an important branch.

Near the center of the tree are two particularly large parent branches, one of them perhaps more flourishing and well supported of late than the other, but both of them apparently essential to the welfare of the tree. From legend alone do we learn which of the two probably represents the main stem and which the secondary offshoot. Whether physic was a specialty which branched off from general Medicine before surgery, or surgery before physic, is not quite clear.

In its westerly transplantation to different countries in successive eras the tree of Medicine, to be sure, has not always put out the same branches in the same way. We may recall the words of the distinguished Philadelphian, John Morgan, who in 1765, on his return from Edinburgh, announced in his justly celebrated "Discourse" his intention of limiting himself henceforth to "those cases which belong most immediately to the office of a Physician" and of no longer "interfering in the proper business of Surgery." From this it could be argued that the practice of physic thus withdrawn from general Medicine, which included handicraft, became in this country at least the first avowed specialty. For the real standard of specialization is the determination to avoid diffuseness by withdrawing from participation in the wider field and by devoting oneself to a more limited one.

One might pursue this subject further and trace the development of some of the various secondary offshoots both of physic and surgery in the past and see what has happened to them—whether they have taken secure root and

continued to flourish or whether after a generation or two they have either died back or become incorporated again by fusion with one of the main stems—but interesting as this might be, it is not the purpose of this essay.

New specialties at present undreamt of will continue to arise. It takes little to start one. The diseases incidental to a novel occupation like aviation; the introduction into the clinic of a new discovery like Wassermann's reaction, or Roentgen's ray; a new instrument of precision like the calorimeter—such things as these will make a succession for all time of unlooked for opportunities for us and our followers in Medicine to engage in new endeavors under novel conditions.

These must be regarded as accidental occasions for specialization, to be distinguished perhaps from the purposeful determination to specialize within an established branch long occupied. But under both circumstances those who can best take advantage of existing opportunities, or can originate others, not only must have had a good general training in clinical medicine and surgery, but must have been thoroughly schooled in the fundamental subjects—in the anatomy, physiology and chemistry of morbid as well as of normal tissues and organs—for without this knowledge any special branch is supported by a root lodged in sand which does not long survive overloading. There is only one way to get a secure seat on any outlying branch and that is by approaching it from the main stem, no matter how wearisome, laborious and time-consuming this process may be.

SPECIALIZATION IN PARTICULAR

In 1905¹ and again in 1910² a paper was read before the Cleveland Academy of Medicine on this selfsame subject of Neurological Surgery as a specialty. The first of them was written shortly after the decision was made to limit my operative surgical work to what seemed to my several advisers, and indeed to me at the time, to offer small pickings. There had dangled for a long time from the branch of surgery, if we may continue with our banian-tree simile, a wisp of root over a very unpromising patch of soil. It had become attached on more than one occasion, though feebly to be sure, and had been tested thoroughly by Agnew in this country and later by von Bergmann in Germany; it had for reasons not far to seek been abandoned as both unfruitful and unsafe. Later on, Victor Horsley turned his brilliant mind to the subject with far greater success than his predecessors, though he showed more interest and perhaps skill in its

1. The Special Field of Neurological Surgery, Cleveland M. J., Vol. 4, p. 1, 1905; Johns Hopkins Hosp. Bull., Vol. 16, p. 77 (March), 1905.

2. The Special Field of Neurological Surgery; Five Years Later, Cleveland M. J., Vol. 9, p. 827 (Nov.), 1910; Johns Hopkins Hosp. Bull., Vol. 21, p. 325 (Nov.), 1910.

physiologic than in its purely surgical aspects.³ Specialization is an uncompromising mistress. It was an avocation of Horsley's, not a subject to which he limited himself, and though he had imitators he left no disciples.

It hardly seemed possible fifteen years ago that the surgery of the nervous system by itself could furnish material enough to occupy a surgeon's undivided attention and insure him a livelihood, far less that it would promise opportunities within itself for further specialization on subjects like tumors of the brain in general or tumors of the pituitary body in particular. Time has shown, indeed, that these early misgivings were unfounded. And that there is not only an appeal but abundant opportunity for special workers who plan to restrict themselves to this outlying branch is evidenced by the fact that a number of surgeons interested in the nervous system have organized themselves into an Inter-urban Neurosurgical Society in the expectation thereby of making more rapid progress in this specialty through an intimate interchange of opinions made possible by clinical meetings.

It is impossible within the limits of an address to enter at all fully into an account of all that has transpired in the field of neurologic surgery during the past decade, far less to give anything more than hints of what lies before us in the way of problems. I shall restrict myself, largely, to some of the topics which have engrossed the attention of my co-workers and myself during the interval, though they represent but a small portion of the larger work in which many have become engaged.

To conform more or less to the plan of my former papers I shall allude in turn to the surgery of the brain, the cord and the peripheral (cranial and spinal) nerves,⁴ with such comment and digression as I may be led into under these separate headings. But before entering on these subjects I desire to say something about a mysterious personal quality necessarily possessed in varying degrees of perfection by every one who does something with his hands—namely, his technique.

NEURO-SURGICAL TECHNIQUE

Perfection in the conduct of his therapeutic measures is as essential for a surgeon as is the technique of laying on colors for an artist or

of producing sound for a musician. One may have abundant knowledge of art or music or medicine and yet be a poor performer. In surgery a proper technique is by no means the only element of success, but it is an important one.

Let us look back for a moment on the conditions at the beginning of the century, when from present standards the methods of conducting both cranial and spinal operations were crude beyond the belief of our juniors who happily know better times. The day of the mallet and chisel for opening the skull was not far removed. An exploratory exposure of the brain was looked on by the prospective patient with the same dread with which an abdominal operation had been regarded a generation before, and by the surgeon with comparable misgivings. Few, if any operators ventured to undertake one of these procedures except under the direction of a neurologist, and only then when conditions had advanced to such a point that the diagnosis could be made beyond preadventure, though by this time, alas, in the presence of tumor, tension within the skull had become extreme. This made a procedure with inherent technical difficulties extremely hazardous, not alone at the moment of its performance but the ensuing complications due to imperfect and hasty closures led with disheartening frequency to complications which sometimes prolonged an existence worse than the original disease.

The most crying need, therefore, in the early years of the century was for an improvement of our technical methods under the realization that what had sufficed for other organs and tissues, when applied to the surgery of the nervous system, was disastrous. Therein lay the failure of Agnew and von Bergmann.

Fifteen years ago we were scarcely at the dawn of an understanding of purposeful decompression for brain tumors. To be sure, the observation had been made and reported more than once that after an occasional osteoplastic exploration which either revealed no growth, or one supposedly unremovable, an entirely unexpected amelioration of subjective symptoms had taken place. However, inasmuch as most of these early operations had been confined to the more accessible central region of the hemisphere, these subjective benefits were more than offset by postoperative paralyses from protrusion of the tense brain through the cranial defect. When the idea of a purposeful decompression over relatively *silent* portions of the brain, conducted, moreover, in areas like the temporal and suboccipital regions where an undue extent of protrusion is checked by securely closed extracranial muscles—when this idea finally took hold, the old explorations which had resulted in a certain measure of relief were resurrected and tabulated as decompressions in our modern sense, which they were not, either in reality or intent.

With the development of a reasonably safe

3. One of his colleagues, indeed, at the National Hospital went so far as to make a study of the brain tumor cases operated on there, and concluded that the average duration of life of patients thus afflicted was longer without than with an operation.

4. There is, too, a surgery of the sympathetic nervous system, poorly developed it is true and hardly recognizable even in this its experimental stage. We have had glimpses of it in certain operations for goiter, in certain forms of treatment suggested for Reynaud's disease; and the proposals by Leriche, in regard to a purposeful surgical paralysis of the vasoconstrictor nerves which accompany the blood vessels, are straws to show the direction of the wind.

The influence of the vagus and the splanchnic nerves on the viscera; the relation of emotional states to metabolic stability; Cannon's experimental anastomoses between phrenic and cervical sympathetic, with their remarkable sequelae—these things indicate what may lie before us if imagination is turned to the application of some of the facts known to physiologists regarding the autonomic nervous system.

and satisfactory procedure for relieving tension both for cerebral and cerebellar lesions, and one which of itself did not lead to paralyses, these palliative operations began to multiply and it soon became apparent to all that the accepted views regarding the cause of what was called optic neuritis, resulting in atrophy and blindness in tumor cases, would have to be revised. For it was obvious that an inflammation of the nerve could not explain a process capable of being checked by the mere relief of pressure, so long as the tumor, to which the supposedly toxic neuritis had commonly been ascribed, remained unremoved.

Inflammations of the optic nerves due to toxic substances and capable of producing atrophy doubtless exist, but changes in the nerve head observable to the ophthalmoscope are infinitely more often due either to an increase of cerebrospinal fluid tension or to direct pressure on the nerve by tumors in the region of the chiasm than to any other cause—so much more often that rhinologists and ophthalmologists must pause before venturing to make the popular diagnoses of the day which lead so often to unnecessary operations on the accessory sinuses.

I cannot speak for others, but for myself the subtemporae and the suboccipital operations are, in the long run, the two most useful procedures in craniocerebral surgery though, as is true of all operations, they are by no means perfected, and there are right and wrong ways of performing them.⁵

The *subtemporal decompression* I would place first on the list. It may be employed as a temporizing measure even in the presence of a localizable lesion, but it is of chief value in all unlocalizable cerebral tumors. Naturally, since the bone defect is purposefully made over the relatively silent temporal lobe, the growth may at times be unexpectedly disclosed. In the presence, moreover, of a questionable cerebellar lesion, the existing symptoms being hardly such as to justify the more elaborate and difficult posterior exposure, the measure may be used as an aid to diagnosis. For the existence of an obstructive hydrocephalus can be determined under these circumstances by a puncture of the temporal horn of the lateral ventricle, a matter of considerable localizing value, though it is to be admitted that in the presence of a hydrocephalus a decompression over the cerebrum gives but slight pressure relief.

The routine operation which may be regarded as of second importance is the *combined osteo-*

plastic exploration and decompression. With the boneflap so placed that its base is in the temporal region, the squamous wing of the temporal bone may be rongeured away after the flap is reflected. Though surgeons in the past have sacrificed without hesitation large portions of the calvarium in eradicating tumors, and occasionally this may be necessary even now, yet it is highly desirable that the cranial chamber should be kept as intact as one's skill and the conditions permit. It is also desirable for many reasons that an operation for tumor should be conducted whenever possible in a single session, and the old two-stage performances, provided there is careful blood-stilling, are less frequently called for.⁶

The third procedure, the *typical cerebellar exposure*, is a still more difficult operation and necessitates elaborate preparations and skillful team work if a long series of these measures are to be carried through with a minimal mortality. In this performance the steps are practically the same, whether it resolves itself into a decompression or in the more or less complete removal of a tumor, should one be disclosed. It is a long two-hour operation at best—an hour for the full exposure and another for wound closure—but when tension is great, when there is threatened respiratory difficulty so that a ventricular puncture in the course of the early stages is called for, or when there is a recess tumor which requires long and careful manipulations, or a tumor of the midline which necessitates removal of the arch of the atlas and prolongation of the dural incision down over the spinal canal as far as the axis, the performance may well require an extra hour or two.⁷

Since the war, influenced by DeMartel's experiences as well as by our own, I have made a few of these cerebellar exposures under a local anesthetic, and though it is possible, I do not feel that I can perform quite as perfect an operation in this way as when the patient is etherized, even though this in itself adds an element of danger. Under a local anesthetic the long seance

6. When a tumor extirpation is anticipated, as in the case of a large endothelioma, a two-stage operation admittedly continues often to be required for there is apt to be undue loss of blood during the elevation of the flap, and there is almost certain to be still more in a certain stage of dislodging the tumor. Under these circumstances I feel that a dural opening at the first session should be limited to the temporal region to allow a protrusion in correspondence with the subtemporal defect—in other words, with the area of bone rongeured away from under the temporal muscle. This will permit the upper portion of the flap to be replaced over an intact dura to await a second session, a certain measure of pressure relief being meanwhile secured. Should the dura be widely reflected at the first session and the tumor exposed with the inevitable protrusion of the hemisphere, this would make one of two things necessary—either an immediate attempt at tumor extirpation, which might be more than the patient could stand, or stripping off the reflected area of bone and replacement of the scalp alone, a procedure which leaves an unnecessarily large cranial defect. One may be compelled occasionally by poor judgment or force of circumstances, to accept one or another of these awkward situations.

7. A neurologist who recently had the endurance to see an acoustic tumor operation on one of his patients carried through to its conclusion with detailed wound closure, layer by layer, suddenly exclaimed: "I see now why my patients who have recovered heretofore after cerebellar operations have all had bulging necks. I had come to think it inevitable."

5. I would have felt ere this that the principles of a subtemporal decompression were so well understood that it was a safe measure in the hands of every general surgeon, but we still see so many sorry results of so-called decompression operations with bone flaps elevated in the region of the temporal attachment and often on the left side, that the happy time does not seem to have come as yet. A detailed account of the measure, long delayed in publication, has just appeared in the "Textbook of Surgical Diagnosis and Treatment," by American authors, edited by A. J. Ochener, Vol. 1, p. 407, 1020.

becomes still more protracted, and by the time the patient begins to ask if you are not nearly through, one can hardly resist the temptation to exceed his established speed limit, to cut corners and thereby run the risk of accidents.

These, then, are the three standard types of operation, though there are innumerable modifications of them. Each surgeon in accordance with his particular training and tastes will have devices of various kinds to overcome difficulties as they arise. These technical idiosyncrasies do not affect the three main issues—the exposure of the lesion, its safe and proper handling, the painstaking closure necessary for a wound which may subsequently be subjected to considerable tension.

I have emphasized before, and must emphasize again, that there is no field of surgery in which fastidiousness is more essential to success. Imperfections in technique in the course of operations on other parts of the body, where other tissues than those of the central nervous system are concerned, may delay recovery but not necessarily impair an end result. But corresponding slips which compromise the function of the nervous system may sometimes leave mental or other disturbances which are irrecoverable and to which death is preferable.

The surgeon who feels a due sense of responsibility regarding these difficult cases and who would reduce post-operative deformities and accidents to the minimum must often put all the reserve he has into a single operation. Without injustice to the patients more than one stereotyped measure, like a trigeminal root avulsion or sub-

temporal decompression, may be undertaken in a single morning, but in the case of the more arduous and uncertain procedures the physical strain and responsibility may be such that he would be foolhardy and negligent of his patients' welfare who would venture on a succession of these tasks.

Then, too, there is no group of patients who require a more detailed preoperative study, in which I feel that the surgeon is obligated to engage, and this with attention to laboratory studies which, in a new specialty, are particularly to be encouraged, is about all that can be properly attended to. *It is not the number of cases operated on which have made contributions in surgery possible, but the detailed and careful analysis of the few, in conjunction with allied laboratory investigations.*

Surgical technique may seem to be a thing entirely apart from the bedside study of patients preliminary to operation and from coincidental investigations in the laboratory.⁸ In a certain sense it is a thing apart, and we are all familiar with men whose operative technique exceed their judgment as to when it should be put to use. We have all known, too, surgeons who were somewhat awkward craftsmen but who possessed such a thorough knowledge of disease and its processes as to atone completely for their possible lack of manual dexterity. Of the two, the latter are often more safe. Surgeons with both qualities highly developed are, alas! not a common breed. The patient, unfortunately, though he pays admission, has not the privilege of viewing the performance, else he might like to see his appendix removed with a flourish, and to applause. His active interest begins when the curtain falls and he is then apt to find himself more comfortable if the audience thought it a tedious and dull show.

In the manufacturing arts, particularly in this country of ours, subdivision of labor has developed to such an extent that no workman makes a completed object. He may excel in the rapidity with which he may drive rivets, in the skill with which he may attach a given piece to an article, of whose remaining parts he has little knowledge and less interest. It is possible in this way, doubtless, to make a greater number of these articles and hence, if they are to be sold, to insure a greater remuneration for someone, but it does not add to the happiness or satisfaction of the artisan. On the contrary, it deprives him of the supreme satisfaction of creating something from the bottom up in which, though an artisan, he comes to take artistic pride.

This is one of the underlying sources of the unrest and dissatisfaction of the laborer. There is something of this tendency in surgery today. Ten or more goiters or hernias treated, or appendixes removed, in a morning is not an uncommon record, but none of them is completed in a thorough-going sense by one person; the chief surgeon may spend but a few moments at the

8. Though there may be differences of opinion in the matter, I personally feel that for the development of surgical technique no place is comparable to the experimental laboratory, and I feel that every young surgeon should begin to acquire his operative training in a series of operations on the lower animals. Certainly in the cases of neurologic operations one should learn on the lower animals the art of trephining, of the use of bone wax, of handling the cord and brain without the production of contusions and extravasations, of dealing with the cerebrospinal fluid which is the keynote of many intracranial operations. The most clever, neat and skillful of the younger generation of neurosurgeons in the country whom I have seen at work have learned their surgery of the nervous system in this way. It has the double advantage of giving them a sufficient laboratory experience to enable them subsequently to pursue to the only place where they are likely to be solved some of the many problems which arise. It was fortunate in my own case and in that of my early co-workers in Baltimore that the Hunterian laboratory was available for this purpose.

But with all this concerning the technique of operation we must not forget that there is a technique of examinations, and that a thorough, orderly and well conducted neurologic study of a patient which demands the use of many instruments of precision necessary for tests of the special sense organs, is an art in itself. The examination of the eye is unquestionably the most important of all, and without the ophthalmoscope we would be quite helpless.

But in matters of localization the perimeter is of even greater value. In the series of papers (of which one or two are still to appear) on the "Fields of Vision in Cases of Brain Tumor," published successively with Drs. George J. Heuer, James Bordley, Jr., and Clifford B. Walker, we fell into an unquestioned error in relation to peripheral interlacing of the color fields. These observations were due to inexperience, and with the highly perfected methods developed by Dr. Walker corresponding field changes were no longer observed. They were due partly to an imperfect technique, but more to erroneous interpretations of the responses of inattentive and easily fatigued patients. Naturally, therefore, color interlacing was found to disappear after operation.

Our faulty observation need perhaps not be greatly lamented for it unquestionably served to reactive an interest in perimetry which before that time, in clinics other than ophthalmological ones, was rarely employed and then only for gross defects.

task—the more essential moments to be sure, and it is renumerative—but it puts him on the basis of that form of specialist whose sole task is to give the final adjustment to the carbureter as a succession of newly-assembled motor cars pass him. This, I do not believe, leads either to real satisfaction in one's professional work or to the greatest excellence in its quality.

It was said of Godfrey Kneller, who painted portraits innumerable, that he only did the faces—others in his studio particularly skilled at portraying hands and wigs and gowns filled in the rest of the picture. This quantity was great and the canvases show it.

THE BRAIN AND ITS ENVELOPES

Tumors.—I find that in the report of 1905 no mention is made of the number of patients who up to that time had been operated on. There had been very few—twenty-nine to be exact—with no instance of a really successful tumor extirpation. The principles of decompression were under discussion and at the time it was the common practice of physicians with a brain tumor suspect—and the diagnosis was not often ventured on—to prescribe a prolonged course of antisyphilitic treatment before considering an operation. It was not until two years later, be it remembered, that the Wassermann reaction was introduced, nor was it perfected by Noguchi until 1911; but even this did not entirely remove this source of delay, for as late as 1913 at the last International Medical Congress, Horsley felt impelled to protest urgently against this form of procrastination. There are other sources of delay which today must be combated, but fortunately this one has been eliminated.

In the early days, though palliative measures brought temporary relief to many, actual recoveries after tumor extirpation were exceedingly few. There were many discouragements even on the side of the temporary alleviation of symptoms, for many patients were in the terminal stages, a large proportion of them blind, or so nearly so that blindness ensued despite a thorough decompression. Then, too the conditions found at necropsy in fatal cases were such as to make it seem that if cures were ever possible they would certainly be so few and far between as hardly to justify the expenditure of such labor.

Curiously enough, looking back on this early series, the first two patients who appear to have been actually cured, if one may use this term critically, both had cerebellar gliomas, and were operated on in 1908. One of them was a small boy of 13 years with a gliomatous cyst twice operated on, the last time three years later, with what appears to have been a successful destruction of the cyst wall. His functional recovery was perfect. He subsequently became captain of his school football team and now, nearly thirteen years later, is married, the father of a family, and regards himself as perfectly well. The other

patient was a young man of 28, with a large glioma removed from the left hemisphere. Except for a slight impairment of vision in one eye on the recession of his choked disks, his recovery seems to have been complete, as may be appreciated from the contents of a recent letter sent me on the twelfth anniversary of his operation:

... Being 39 years old, married and with two children beside other dependents, I did not feel as though I could be spared from home and so instead of enlisting in 1917 I went with the Bartlett Hayward Company who had contracts for making shrapnel shells. My particular work was making a part of the 155 mm. shells. I had to read micrometers to the one-thousandth of an inch, and if I had to depend on my left eye I could not have done it for it was already affected before the tumor was removed, as your old charts will show, but the other is normal and good enough for two. I was able to stand the hard work with the best of them though I had the "flu" and pneumonia, as did lots of others. . . .

One would have thought that the initial successes would have been in extirpations of benign tumors like the endotheliomas or possibly acoustic neuromas. To be sure, the first reasonably successful operation for an acoustic neuroma—a case reported by Allan Starr—dates back nearly as far, namely, to 1909, and though the patient remains reasonably well the degree of functional recovery is by no means perfect, for though these recess tumors are benign they present exceedingly difficult surgical problems.

Doubtless in the earlier series many endotheliomas were overlooked, for, concealed as they are apt to be between the hemispheres with but little surface evidence of their presence, they are difficult to expose—at least I can only account for their present proportional prevalence by this assumption. It was not until 1910, shortly before the reading of my second paper, that I had my first really successful endothelioma extirpation with a perfect result, in a man who since that time has taken an active part in national affairs.

Though in 1910 there were only 180 tumor cases in the series, they nevertheless were beginning to appear in increasing numbers and have now become so many as to necessitate limiting the number under observation at a given time. All told, in the Baltimore series there were 330 cases up to the fall of 1912, and since then the series of 735 cases observed at the Brigham Hospital to September 1 brings the number well above 1,000. One hundred examples of a given lesion each year provides as much material as can well be studied, and one must check the tendency to accept more than can be digested. It was far easier to comment ten years ago on 180 cases of presumed tumor than today on 1,000.

Brain tumors are common—far more so than I believed to be the case when this same statement was made fifteen and again ten years ago. The time has come when we can no longer afford to group them together as a class any more than we can group all abdominal tumors together and make a composite report on them which is at all worth while. We must take tumors in certain situations or, better still, tumors of certain kinds in certain situations, and give them special study. I have attempted to do this in a monograph deal-

ing with the acoustic neuromas, of which there have now been forty-five verified cases, and feel that such a group plan is the only way really to advance the subject. I shall hope ere long to follow it with a similar report on a series of some seventy verified endotheliomas which represent a particularly interesting type of intracranial tumor.

Tumor Classification.—It is an Irishism to say that other conditions sometimes resemble tumor more closely than tumor does itself. I mean by this that some of our most favorable examples of tumor are ones in which the usual symptomatic

of an occasional patient with the diagnosis of "tumor uncertified" proves in the end to be other than a tumor case.¹⁰

The following greatly compressed table will show something of the numbers and give a general idea of the situation of the tumors in my complete series up to the first of September.

It will be seen that of 1,072 cases classified in the tumor group, in 604, or about 60 per cent., the nature of the tumor has been histologically verified. It would lead us too far in a general address to attempt a classification of these verified lesions or to tabulate them according to their

TABLE 7.—AUTHOR'S BRAIN TUMOR SERIES

Series	Forebrain			Pituitary Including Supracellar		Hindbrain			Totals
	Certified	Uncertified	Suspects	Certified	Uncertified	Certified	Uncertified	Suspects	
Baltimore -----	101	51	23	41	20	53	34	14	337
Boston -----	146	110	62	132	52	131	72	30	735
Totals -----	247	161	85	173	72	184	106	44	1,072

triad of headache, vomiting and choked disk is completely wanting though all three would doubtless have appeared in time. On the other hand, many patients are admitted to the clinic with a presumptive diagnosis of tumor, of the presence of which, nevertheless, we are often extremely doubtful despite the full blown classic phenomena.

We have come, therefore, to classify the cases as (1) *tumors certified* (or verified) only when the diagnosis has been confirmed and the type of tumor identified by histologic examinations of tissue secured either at operation or necropsy;⁹ (2) *tumors uncertified* when, though not histologically confirmed, the diagnosis is well nigh unquestionable; (3) *tumor suspects*, when it is a likely diagnosis. In this last group we keep a careful list also of a variety of conditions loosely designated as *pseudo-tumor* (though not in the meaning of Nonne), comprising states, whether so proved or not, other than tumor, but which have been sent to the clinic in view of a supposed tumor syndrome. The tentative diagnosis of some of these conditions, as other than tumor, may come to be verified subsequently at operation or necropsy, but mistakes in these borderline lesions are common and cases long classified as pseudo-tumor sometimes prove in the end actually to have been tumor cases, just as the case

anatomic regions, though in view of their group predominance the tumors of hypophysial origin have been separately listed in Table 1. We must concern ourselves on this occasion more with the surgical than with the pathologic aspects of these conditions.

To give some general idea of the more strictly operative features of the work, the following figures of a consecutive twelve months of service ending September 1, 1920, have been assembled for me. Of 182 patients admitted with a diagnosis of presumptive or possible tumor during this period, the cross reference cards show that fifty-four were not operated on.¹¹

The remaining 128 patients were operated on in 160 sessions with sixteen fatalities, giving an operative mortality of 10 per cent., a case mortality of 12.5 per cent. and a mortality of 15.5 per cent. for the seventy-seven patients for whom a tumor extirpation, partial or complete, was attempted. Considering the gravity of many of these procedures the percentage may be considered reasonably low, but it is capable, I am sure, of being reduced by one-half with earlier and more exact diagnoses.

11. These may be dismissed with the explanation (1) that three patients died shortly after entering the hospital, two of them with tumor verified at necropsy; (2) that twenty-three are recorded as cerebral or cerebellar tumor uncertified, one of these the third of the fatal unoperated cases; (3) the remaining twenty-eight cases are cross-indexed as tumor suspects and represent a great variety of conditions with such presumptive diagnoses as encephalitis, arteriosclerosis, aneurysm, cerebral syphilis, and so forth. In this group of twenty-eight there is only one case in which the lesion so far has been transferred from the tumor suspect to its proper group owing to verification of the lesion: a blind child with symptoms I had thought to be due to an infundibular tumor with hydrocephalus, but which proved to be due to a thrombosis of the superior longitudinal sinus.

9. We make one exception to this, namely, in the case of gliomatous cysts the character of whose fluid contents in about 99 per cent. of cases serves to verify the character of the lesion.

10. This question of tumor classification I brought before the American College of Surgeons in an address last fall, and it is a matter which Dr. Percival Bailey has elaborated in some detail in connection with the series of cases observed during his sojourn as my assistant.

TABLE 2.—TABLE OF OPERATIONS FOR TWELVE MONTHS ENDING SEPTEMBER, 1920

Character	Num-ber	Fatali-ties
Forebrain:		
Subtemporal decompressions (palliative)-----	20	1
Subtemporal decompressions (disclosing tumor)-----	2	0
Osteoplastic exploration (cerebral)-----	5	0
Osteoplastic exploration (with decompression)-----	24	0
Osteoplastic exploration (with total or partial tumor removal)-----	24	5
Pituitary:		
Transphenoidal (partial removal of tumor)-----	20	1
Osteoplastic frontal exploration-----	8	0
Osteoplastic frontal exploration (total or partial tumor removal)-----	7	0
Osteoplastic temporal exploration-----	1	1
Cerebellar:		
Suboccipital exploration and decompression-----	25	2
Suboccipital exploration (with total or partial tumor removal)-----	24	6
Totals-----	160	16

The following additional notes of the fatalities should be given. One of them occurred in the series of twenty-two subtemporal decompressions for unlocalizable tumors. No examination was permitted and the lesion therefore remains permanently not certified.

Of the twenty-four attempts to remove cerebral tumors when exposed by an osteoplastic cranial resection there were five fatalities, four of them in the endothelioma group, as follows: of the gasserian ganglion; 1; of the falx, 1; of the mesial hemisphere, 2 (the death in one occurring several months after a total extirpation; in the other, an old man of 86 with epilepsy, it occurred from exhaustion due partly to a prostatic obstruction necessitating a suprapubic operation). The fifth fatality in this group followed the extirpation of a large glioma.

Of the thirty-six pituitary, or attempted pituitary, exposures operated on by various routes, two patients were lost, giving a mortality of 5.5 per cent. One of the twenty transphenoidal operations, an advanced case of acromegaly, died in forty-eight hours (necropsy refused). There were no fatalities in the fifteen transfrontal cases, but then, in a considerable smaller percentage in this than in the transphenoidal group, the operation was successful in its purpose. The single attempt to deal with an interpeduncular tumor from the side was fatal, presumably from postoperative cerebral edema, a consequence of the dislocation necessary to secure a sufficient exposure.

Of the twenty-five suboccipital explorations for presumed cerebellar lesions, the two deaths occurred in cases of mistaken tumor location, one that of a child with secondary hydrocephalus due to a bilateral papilloma of the choroid plexus, the other a patient with a large diffuse cerebral glioma.

Six of the twenty-four patients with cerebellar tumor succumbed after a more or less complete tumor extirpation; one of them three weeks after operation, following a fall causing contusion and hemorrhage; another a patient with an acoustic tumor who also had exophthalmic goiter and who died of weakness on her twenty-eighth day; another an acoustic tumor extirpation with death from inhalation pneumonia on the fiftieth day. The fourth patient died on the second day of respiratory paralysis after a partial removal of a glioma from over the fourth ventricle; the fifth died suddenly on the third day, after a thorough evacuation of multiple cysts due to chronic arachnoiditis (pseudo-tumor, verified); the sixth patient died six weeks after an apparently successful extirpation, intact, of a tuberculoma.

The highest mortality, therefore, in this twelve months' series was in the suboccipital group of forty-nine operations with eight fatalities, giving a 15 per cent. mortality, or a 25 per cent. mortality for the cases in which tumor extirpation had been attempted. In this particular respect the record for the twelve months was a bad one, but the high percentage is due to the inclusion of the three patients who died some weeks after the operation from causes not directly attributable to it. Were one justified in eliminating these three cases the mortality would fall one-half, which is about where it should be.

Needless to say, in this entire series there has not been a single case of wound infection. One of my assistants, who had served in the hospital for over two years, had seen a fungus cerebri only in pictures until he went to France with our hospital unit and met with this condition for the first time in the cases of cranio-cerebral injury to gunshot wounds.

Pituitary Disorders.—In my address of 1905 there is a footnote to the effect that conceivably a diseased pituitary body might some day be successfully attacked. How little was understood of pituitary disorders at the time can be appreciated from the fact that not until a year after (1906)

was the first example of an infundibular tumor recorded in the Johns Hopkins series, and though a diagnosis of tumor with hydrocephalus was made, we had not the faintest idea of the location of the lesion. When this was disclosed long after at necropsy we had, even then, no inkling of the disturbances of metabolism the tumor had provoked.¹²

Today the diagnosis of so-called adiposogenital dystrophy, particularly when due to a suprasellar tumor, would be made at sight by an undergraduate, for the clinical aspects of pituitary insufficiency when once pointed out prove to be as striking as those of cretinism or myxedema. Chagrined as we were by this experience, it nevertheless served a good purpose since it made possible an interpretation of the experiments undertaken the following year in the Hunterian Laboratory with S. J. Crowe and John Homans. For in the course of some experimental canine hypophysectomies, the counterpart of these clinical states, showing that they are due to a deprivation of pituitary secretion, was unexpectedly hit upon.¹³

From this small beginning it has come about that hypophysial disorders are now recognized almost as often as those of the thyroid, and there is no reason to believe that one of these two glands is affected by disease any oftener than the other, though in view of the exposed seat of the thyroid the diagnosis may be read from afar.

In March, 1909, I first ventured to operate for a pituitary tumor in a case of acromegaly, employing a modified trans-sphenoidal approach to the sella, the result of abundant studies on the cadaver. The procedure was merely a further development of the operation by way of the nose, first used in its crudest form by Schloffer, the chief modifications making it possible to avoid nasal deformity and to lessen the likelihood of a postoperative infection. The case was a fortunate one¹⁴ and led me to develop the operation by this route still further, though fully aware of its limitations, for it is only appropriate to those cases in which there is a wide dilatation of the sella.

At the time of my second address in 1910 there had been twenty cases under observation, and the following cautious expression of opinion was given:

No one as yet would venture to assert that a tumor in the infundibular region can be totally removed, and inasmuch as pituitary headaches and pressure against the chiasm may be relieved by a local decompression or by the chance evacuation of a cyst, it would seem wise for the present at least, in view of the importance of the gland, to confine operative measures in most cases to the mere removal of the sellar base with incision of the glandular capsule—a local decompression.

A further statement expressing conservatism

12. This case, with one other, was reported under the title "Sexual Infantilism with Optic Atrophy in Cases of Tumor Affecting the Hypophysis Cerebri," J. Nerv. & Ment. Dis., Vol. 33, p. 704 (Nov.), 1906.

13. Clinical Aspects of Hypopituitarism, J. A. M. A., Vol. 53, p. 249 (July 24), 1909.

14. Partial Hypophysectomy for Acromegaly, Ann. Surg., Vol. 1, p. 1002 (Dec.), 1909.

was made to the effect that "hypophysial tumors which have extended from the infundibular region into the cranial chamber proper must be treated by the same rules of decompression as would be applied to any equally inaccessible lesions elsewhere."

Time has shown that the former statement was unnecessarily cautious for in most trans-sphenoidal operations a considerable amount of tissue is removed. In the latter statement I was quite wrong, for a subtemporal decompression rarely benefits a patient suffering from pituitary headaches, for they are due to local rather than general pressure effects. Hence when an adenomatous gland has penetrated its dural envelope and invaded the cranial chamber, it must be surgically approached from above, if at all, by an osteoplastic exposure of the region.

In a monograph on pituitary diseases, published in 1912, after a general discussion of the subject, my forty-three surgically treated cases were recorded. I had had but a single experience at the time with osteoplastic temporal procedures, such as Horsley had practiced, and none with the approach from in front by elevating the frontal lobes as originally proposed by Hartley and McArthur.

With our increasing familiarity with pituitary tumors, however, the cases with an indubitable infundibular lesion surmounting a more or less normal sella, which would preclude an operation from below, came to be so often recognized as to necessitate the employment of some osteoplastic measure, and the frontal procedure was given preference. Since my first case (Dec. 12, 1913), a considerable number of these operations, occasionally with a gratifying result, have been undertaken. Recently Heuer and Dandy in Baltimore and Adson in Rochester have warmly advocated a development of the lateral approach, first employed by Horsley. Unquestionably there is no one operation suitable for all cases, but I feel that the postoperative complications and high mortality, approximating 40 per cent., which so skillful an operator as Dr. Heuer admits,¹⁵ in view of the scant promise of permanent cure on recovery, will deter others from adopting this procedure.

In general terms, it is my present opinion that when there is a primary pituitary adenoma with enlargement of the sella and signs of implication of the chiasm, the operation of choice is a trans-sphenoidal one. Properly conducted, it is an

operation of comparatively low mortality,¹⁶ convalescence is a matter of a few days and the results are often brilliant, with restoration of vision—the main object of the operation—which may be astonishingly rapid. However, as Dr. Heuer points out, it is not an operation which is likely to be repeated with equal success (true enough of any operation) in case the adenoma continues to grow rapidly or has already broken down the dural barriers and invaded the cranial cavity. Under these circumstances, if an operation is to be done at all, it must be from above if there is to be any prospect of preserving or restoring vision, and this—an improvement in vision—not mere operative recovery, is our present criterion of a successful procedure.

It is very doubtful, however, at an early stage of a primary intrasellar adenoma when the conditions are favorable for an operation through the nose, whether patients should be urged to, or would be willing to, submit to an operation from above, with its admitted high mortality and likelihood of complications. For it is accompanied by a wide exposure of the brain whose cortex may suffer injury as may indeed the chiasm itself, and the operation furthermore opens the dural barriers so that further enlargement of the growth finds ready access to the region we would wish to protect.

With primary infundibular tumors surmounting, as they often do, a small sella of normal proportions, the problem is entirely different, and I am led to favor, with some modifications, the unilateral osteoplastic frontal operation. In the thirty-four patients with operations of this type (forty-three in number) there have been only two fatalities, the second and third cases. However, in only seventeen of the thirty-four patients was the lesion disclosed, and it could not be satisfactorily dealt with in all of them. In 50 per cent. of the cases, therefore, the nature of the lesion remains uncertified.

In a few cases, nevertheless, the results have exceeded all expectations, and it has been possible to enucleate small solid tumors or to empty a cyst and subsequently to detach and draw out its collapsed sac. But I must confess that it is not an operation to be made light of, and I have occasionally added to the pre-existing damage of the optic nerves. Indeed it has been necessary once or twice to divide the functionless one of the pair in order to dislodge the growth. In the case of the pharyngeal-duct cysts, a condition which would seem most favorable, the results have been disappointing, for the cysts promptly refill unless the wall is fully removed, and this is not always possible.

The fight for vision is the crux of these operations, and, after all, the question of proper methods we neurosurgeons must settle among ourselves, not by writing papers but by seeing one another's cases and attending one another's clinics. Meanwhile neurologists and physicians

15. Heuer, G. J.: Surgical Experiences with an Intracranial Approach to Chiasmal Lesions, *Arch. Surg.*, Vol. 1, p. 368 (Sept.), 1920.

16. At the time of writing my monograph on the "Pituitary Body" in 1912 there had been twenty-nine trans-sphenoidal operations with four deaths (13.7 per cent. mortality). By the time of the Weir Mitchell Lecture (J. A. M. A., Vol. 63, p. 1515, [Oct. 31] 1914) on "Surgical Experiences with Pituitary Disorders" there had been to May 12, 1914, seventy-four of these operations with seven fatalities (9.5 per cent. mortality). A review of the cases since then shows an additional eighty-three operations with eight fatalities (9.8 per cent), making 157 transsphenoidal operations in all with a mortality of 12.1 per cent. for the entire series.

who have the decision to make may be comforted by the fact that the majority of these operations can be performed with a comparatively low mortality and a degree of symptomatic improvement which is constantly increasing.

Patients with disorders of the ductless glands, of the hypophysis in particular, show more or less characteristic mental attributes not necessarily deviating widely from the normal. I was inveigled once into writing an article on the subject, and whether from this or from some other beginning certain practitioners calling them-

selves endocrinologists have erected an extraordinary structure of symptomatic complexes based on meager evidence and a fervid imagination. There is no way apparently of checking these elaborations, which bear about as much relation to the functions of the ductless glands as did the phrenological imaginings of Gall and Spurzheim to cerebral localization. Epidemics of this sort from time to time hysterically sweep over medicine, dying out in due course, the more quickly if unmolested.

(To be Continued)

Morbid Conditions of the Pelvic Organs in Women and Their Relations to Various Nervous Disorders

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Editor's Note.—The General Practitioner as well as the Gynecologist will often find it very advantageous to refer certain patients with morbid pelvic conditions and associated nervous symptoms to the Neurologist for a thorough examination. It is only in this way that the diagnosis can be made clear in certain cases and it is usually discreet to predetermine certain neurotic conditions before submitting certain patients to the strain of operations that would leave them worse off than before. It is not infrequent that operation in the presence of certain neuroses may precipitate a very serious breakdown. Dr. Shroyer pertinently holds that a very good guide to prognosis is that the removal of the pelvic lesions will relieve the nervous disturbance only in so far as it is due to malnutrition or to general irritation of the nervous system dependent on the local irritation.

NO one can long practice the specialty of Gynecology, without becoming impressed with the extreme importance of the nervous element in the symptomatology of his patients.

Although in employing the term *nervousness*, one is dealing with a very loose expression, nevertheless, popular usage, both among the laity and the profession, has confined its meaning to definite limits.

Thus a patient, who states that she is *extremely nervous*, is describing a symptom that to her is *entirely specific*, and one which to the physician is *perfectly intelligible*.

We are, in the present discussion, not so much concerned with the various phases of nervousness, as with the underlying conditions that cause it. We shall leave out of the discussion altogether those cases in which the nervous symptoms indicate some essential mental deviation.

FUNCTIONAL NERVOUSNESS

Functional nervousness may be constitutional or acquired. By constitutional we mean a neurotic habit, which is either the result of an unstable nervous inheritance, or one in which both factors have played a part. By acquired neurosis we mean one which, appearing after the complete formation of character, may be referred to some intercurrent physical disability, such for example, as a pelvic lesion. The excellent work of the psychoanalysts has taught us much concerning the constitutional neurosis.

From Freud we have become acquainted with the great field of unconscious thought, and learned the influence of childhood fixation of

future character. The psychoanalysts, however, have paid little attention to the specifically acquired neuroses that are of special interest to the gynecologist, nor have they given due consideration to the important role played by the internal secretions in all emotion and effected state. The gynecologist is, therefore, thrown to some extent on his own resources in estimating the cause, character and therapeutics of those neurotic conditions which he, as a specialist, is called upon to treat.

We shall accordingly exclude at the outset mere cases of coincident where a patient suffering from some pelvic disorder, happens also to have a coexisting nervous malady and vice versa; we shall, therefore, confine ourselves mainly to those nervous diseases which are directly induced or aggravated by pelvic disorders.

CLASSIFICATION

A. Organic and its subdivision—Central: Tumors (Metastatic), Tabes and Disseminated Sclerosis, Vascular lesions of spinal cord and brain, Chorea, Eclampsia Epilepsy Peripheral: (neuritis neuralgio) Neuritis, Neuralgia.

B. Functional—Hysteria, Vaso-Vagal attacks, Neurasthenia.

C. Mental Diseases—Insanity of Pregnancy. Insanity of Puerperium. Insanity of Menopause.

ORGANIC DISEASE

These conditions are met within the central and peripheral nervous system. *Malignant growths* in the breast, uterus or ovary may produce a secondary growth within the nervous system, and such metastatic deposits are often multiple. They may occur within the brain or

spinal cord producing signs and symptoms, sensory, motor and reflex which ought to enable us to recognize their situation. They may, however, affect *silent areas* of the brain without producing facial symptoms.

Primary degenerative diseases of the nervous system, notably disseminate sclerosis and tabes dorsalis, are often acutely aggravated by pelvic conditions and especially pregnancy.

Acute transverse lesions of the spinal cord occur occasionally in women who are already pregnant. Some of these cases are due to acute softening from syphilitic endarteritis. Such cases, whether due to softening or trauma with complete sensory and motor paralysis of the lower limbs and lower part of trunk, may go to full term.

Vascular lesions may occur, producing hemiplegic or paraplegic symptoms. Such cases are often due to arterial thrombosis, sometimes of syphilitic origin, and at other times attributed to excessive coagulability of the blood.

Chorea has a tendency to be aggravated during pregnancy. Chorea gravidarum appears in healthy young women or patients who have previously suffered from articular rheumatism.

Puerperal convulsions constitute an epileptic form syndrome of toxic origin occurring toward end of pregnancy, or during labor or just after it, probably predisposed by auto intoxication of pregnancy and renal insufficiency.

There is not sufficient evidence to associate *epilepsy* in any way with diseases of the pelvic organs, although diseases of tubes or ovaries may serve to aggravate certain cases of epilepsy.

Peripheral nerve lesions are occasionally met with, in association with uterine and ovarian disease, mechanical pressure on lumbo sacral roots may be produced by tumors, or by inflammatory condition within the pelvis. It is a common experience to find pelvic cellulitis associated with sacral pain, sometimes radiating down the back of the thighs, such pain clearing up when cellulitis is relieved.

Ureteritis, or inflammation of the female pelvic ureter, is more common than generally supposed. Irritation passing over the intercostal results in pain in abdomen; over the lumbar plexus, pain in the inguinal, hypogastric and external genital regions; over the sacral plexus, pain in external genitals, rectum, thighs, and legs; over the uterine plexus where artery crosses ureter, pain in uterus; ovarian plexus to ovaries, gastric to stomach, mesentery to intestines.

Ureteritis is frequently due to lacerations and infections of the cervix, and by their close relation to the various named plexuses of the pelvis, we have the widely separated nervous manifestations.

Every physician and surgeon should be able to palpate the female pelvic ureter and thus

diagnose a ureteritis or inflammation of the pelvic ureter.

Peripheral neuritis is sometimes produced by prolonged pressure of the fetal head during labor; also puerperal sepsis, to infections after abortion or even after pelvic operation.

Some of the time honored and generally accepted notions concerning pelvic reflex disturbance, have been shown, by careful investigation and observation, to have no basis. In fact, there is still a large unknown zone in this field, a most interesting and inviting one, and into it investigators are pushing from all sides, the gynecologist, neurologist, pathologist, and physiologist, particularly the latter in the widespread investigations into physiological chemistry (hormones, secretins and internal secretions in general), which promise to make more clear the hazy term—*reflex nervous disturbance*.

MALNUTRITION AND NERVOUS EXHAUSTION

In handling gynecologic patients with nervous systems, or nervous patients with gynecologic symptoms, we must not forget that class of patients coming under *malnutrition*. The malnutrition group is extensive and comprises the following:

(1) When the malnutrition is due wholly to the pelvic lesion; the nervous disturbance being secondary and due to depression of the general health by pelvic disease.

(2) A marked nervous exhaustion, with its various distressing symptoms, may result directly from and apart of the general malnutrition due to any of the exhaustive pelvic disease, such as chronic pelvic suppuration, or persistent blood loss from uterine fibroid, or carcinoma or excessive menstruation.

(3) Or, the malnutrition is due partly to some other lesion or lesions, a serious lesion of the kidney or liver, or gastro intestinal tract, or heart or lungs. This group includes many patients. It is a group in which physicians have repeatedly fallen down pretty hard, because of their failing to subject the patient to a thorough gynecological examination. It is easy to jump to the conclusion that the pelvic lesion is the whole cause of the trouble.

(4) Or, the malnutrition is due not at all to the pelvic lesion, but wholly to some other lesion or lesions. The measure of responsibility of the pelvic lesion for the chronic invalidism must be established by careful critical investigation.

(5) Again, the malnutrition is not due to any definite lesion, pelvic or otherwise, but to persistently recurring suffering at the menstrual period. It is this regularly recurring suffering that produces the malnutrition through its interference with sleep, digestion, exercise and general normal activities of the body. Long ago when double oophorectomy was in vogue for all sorts of nervous affections, the occasional brilliant result secured occurred in just such a class of

patient, and the result was due, not to the cure of some systemic disease of the nervous system through the influence of the removal of the ovaries, but to the cessation of recurring menstrual torture, which gave the patient a chance to regain normal nutrition and health.

FUNCTIONAL NEUROSES

We come, therefore, to the neurologic group of functional diseases.

In patients of this group, there is some definite disease of the nervous system, such as hysteria, chorea, epilepsy, melancholia, general or local neuritis, cord lesions, etc., or there is that inherent instability of the nervous system comprised under the term *neurotic*.

Hysterical anorexia, when the patients distaste for food may lead to a profound degree of emaciation, is often associated with amenorrhea. *Anorexia nervosa* arises more commonly at puberty and during adolescence than in later years.

Vaso-vagal attacks are a curious paroxysmal variety of functional nervous disturbance of the menopause, the symptoms of which are apparently due to an effectation of the vagal distribution of the cranial autonomic nervous system. The attack generally begins with an epigastric aura, quickly followed by violent irregular and rapid beating of the heart, together with the sense of suffocation and sometimes a feeling of impending death. The limbs become icy cold, followed by burning flashes or clammy sweat. Small doses of nitroglycerine frequently relieve these attacks.

The syndrome known as neurasthenic, or *nervous exhaustion*, is not a primary disease, but is the result of some antecedent physical or emotional strain.

Diseases of pelvic organs, dysmenorrhea and menorrhagia from any cause, pelvic peritonitis, or cellulitis, displacement of the uterus or ovaries, inflammatory or malignant infections and so on, are all capable of producing symptoms of neurasthenia, or a nerve exhaustion. These pelvic conditions must be accurately diagnosed and removed and it takes a gynecological examination far above the average to come to an accurate diagnosis.

ADVISABILITY OF NEUROLOGIC EXAMINATION

Neurologic investigation is always in vogue in all gynecological cases. How far one will go personally to investigate in this direction, depends on the time at his disposal, and his interest and training in the field of systemic nervous disease. As a matter of fact, every difficult case should be referred to some neurologist for a thorough investigation, either to clear up the diagnosis, or to have a thorough knowledge of the condition of the nervous system before, subjecting the patient to the strain of operation, for in some neurologic conditions operations would be quite inadvisable. For very frequently considerable time and treatment by a neurologist are necessary in order to

determine definitely the neurologic features of a given case.

Occasionally, the patient will persistently object to the neurologic investigation. In such cases, if the nervous symptoms are at all serious, it is well to refuse to operate. The nervous system may be in such a condition that the strain of operation would make the patient worse, and it might even precipitate a very serious breakdown.

PROGNOSIS

The prognosis in the operative treatment of those gynecologic, neurologic patients, is indicated in a general way by the grouping attempted in this paper.

A very good guide to the prognosis is that, the removal of the pelvic lesion will relieve the nervous disturbance only insofar as the nervous disturbance is due to malnutrition or to general irritation of the nervous system dependent on the local irritation.

A gynecologist that is up to the standard will not admit any specific influence by way of the nerves of a pelvic lesion over that of a like lesion in any other of the important deep-seated organs.

Investigations have shown that many of the organs of the body give into the blood specific substance having definite general and local effects, and the ovary belongs to this group. Furthermore, it is carried by the blood and not by the nerves. Therefore, when asked how far the removal of a pelvic lesion will benefit a patient with some general nervous disease, the answer is "as far as the removal will improve nutrition and allay general irritation." When the prognosis is placed upon the above plan, the patient and every one concerned will be satisfied.

765 REIBOLD BLDG.

New Books

Eye, Ear, Nose and Throat Nursing, by A. Edward Davis, A.M., M.D., Professor of Diseases of the Eye in the New York Post-graduate Medical School and Hospital, and Beaman Douglass, M. D., Professor of Diseases of the Nose and Throat in the New York Post-graduate Medical School and Hospital. Second revised edition. With 32 illustrations. F. A. Davis Company, Publishers, Philadelphia. Price, \$2.50 net.

Tuberculosis of Children: Its Diagnosis and Treatment. By Professor Dr. Hans Much, director of the Department for the Science of Immunity and for the Research of Tuberculosis at the University of Hamburg, Germany. Translated by Dr. Max Rothschild, Medical Director of the California Sanatorium for the Treatment of Tuberculosis, San Francisco and Belmont, California. The Macmillan Company, New York, publishers.

Tuberculosis with Reference to Gynecology and Obstetrics*

Wm. D. Fullerton, M.D., F.A.C.S., Cleveland

Editor's Note.—When it is considered that from 25 to 60 per cent. of women date their tuberculosis from their pregnancy, it soon becomes evident what a vital bearing tuberculosis has upon social conditions and public welfare. An even more serious consideration is the fact that the mortality for the first year of children of tuberculous mothers is from 50 to 70 per cent. In view of the dangers involved in pregnancy it is inadvisable for the tuberculous woman to marry. Dr. Fullerton does not advise the termination of pregnancy for a healed or inactive tuberculosis, but he believes that termination is indicated as early as possible in active cases. After the sixth month little is to be gained by interruption. Should the tubercular mother go to full term she should be accorded every advantage of the most expert obstetrical care. Pelvic and genito-urinary tubercular infections are not infrequently encountered by the gynecologist and the treatment must be dependent on the extent of the infection and the organs involved.

TUBERCULOSIS as met with in obstetrics and gynecology has many similar features, but in so many respects there are such differences that it seems wise to handle the topic as two separate subjects.

PREGNANCY AND TUBERCULOSIS

The prevalence of tuberculosis in women of childbearing age is much greater than ordinarily suspected. Out of every four women between the ages of fifteen and fifty, one dies of tuberculosis, and this would indicate that there are twenty to forty thousand tuberculous pregnant women in the United States, and if the early and unrecognized cases are included they would probably raise these figures to fifty thousand.

Incipient tuberculosis has but slight effect on pregnancy. With a more advanced tuberculosis pregnancy is less apt to occur, and if conception does take place, it is only in those cases with gross involvement that premature expulsion is more common than ordinarily. The accident is due to the cough, fever, vomiting, toxicity of the individual, or to the tubercular infection of the decidua, placental hemorrhage, or other complications. Mild cases go through labor uneventfully, but the severe cases not infrequently show marked aggravation of their distressing symptoms, and in their weakened condition labor is prolonged and the need for interference greatly increased.

The patient's circumstances, care and surroundings alter to some degree the effect of pregnancy on the disease, but in general the disease is most disastrously influenced. In those with tubercular tendencies pregnancy may be directly responsible for the development of the disease, and unrecognized incipient tuberculosis may develop rapidly, and dormant quiescent lesions advance with frightful rapidity. At Saranac 63 per cent. of the tuberculous women dated their disease from pregnancy. The figures of other authorities range from 25 to 60 per cent.

During early pregnancy some cases may show slight improvement in their disease, but late pregnancy and labor is detrimental to the vast major-

ity of cases, the figures ranging from 38 to 75 per cent. and immediate or early fatalities are recorded in 47 per cent. Tuberculosis of the larynx is the most unfavorably affected where the maternal mortality reached 90 per cent. and the fetal mortality 75 per cent.

TRANSMISSION TO THE CHILD

The child born of tuberculous parents may be infected *in utero*, and though some claim the infection may be direct through the spermatazoa, I feel very strongly and the majority of authorities believe that fetal infection is always secondary to maternal infection. The likelihood of direct infection from the tubes or decidua is remote, since when maternal infection exists conception is very improbable. The recent work of Slemons on transmission of the bacteria through the placenta and the finding of tubercle bacilli in from 20 to 70 per cent. of the placenta of tuberculous women make this mode of infection the most common. The new-born child may show evidence of infection. The mortality for the first year of children of tuberculous mothers is from 50 to 70 per cent. Without question many children who are infected before birth show no evidence of such infection at that time. The greatest danger to the offspring is inherited predisposition, and of post-natal infection.

THE DANGERS OF NURSING

One of the greatest drains on the tuberculous mother is occasioned by nursing. She may have weathered the storm of her pregnancy fairly well, but even a mild or inactive tuberculosis will often progress very rapidly as the result of nursing. It is at this time that the child is most apt to become infected, so that nursing should rarely if ever be permitted the tuberculous mother, and a wet nurse or properly modified cow's milk should be provided for the child.

MARITAL CONSIDERATIONS

Neither men nor women with tuberculosis should marry. The men become the source of infection to their wives, and indirectly to their children. This paper already gives sufficient reasons why tuberculous women should not

*Read before the Lorain County Medical Society, June 8, 1920.

marry. When both man and wife are infected, vasectomy should be done on the husband. The tuberculous woman should be warned against becoming pregnant, and every means of prevention be placed at her disposal, which as a rule are not preventive. No operative procedure is warranted to prevent a first pregnancy, which may never occur, but subsequent pregnancies must be prevented. The option in this procedure is between salpingectomy, hysterectomy and oophorectomy, and preference should be given in the order named. Very rarely is oophorectomy justified, and hysterectomy unless there be fibroids or other complicating pathology is only permitted in case menstrual bleeding has been severe, and is in itself a hindrance to recovery.

THE QUESTION OF TERMINATING PREGNANCY

The care of tuberculosis during pregnancy begins with its prevention. Women, pregnant or subject to pregnancy, should take every precautionary measure against infection, including hygiene and pulmonary observation. If the condition is present with the occurrence of pregnancy, the tuberculosis should be cared for along the same lines as in the non-pregnant state. The state of the disease and duration of the pregnancy will govern one's actions in dealing with the pregnancy. Interference with gestation will be to save the mother immediate danger or to prevent progressive development of the disease. Rarely will the mother be in immediate danger.

Termination for a healed or inactive tuberculosis is not justified. In active cases termination should be done as early as possible. After the sixth month but little is to be gained by interruption except in the very rapidly progressing cases. Up to the fourth month the cervix may be packed and after sufficient dilatation takes place the contents freed with the finger and removed with placental forceps. After the fourth month simple laparotomy and hysterectomy, followed by resection of the uterine end of the tubes seems to me to be the simplest means of dealing with the situation, though labor may be induced by bags, or vaginal section done, neither of which sterilize and both of which necessitate a subsequent operation. However, my own preference, is only to be undertaken in well trained hands. At best the results are not encouraging. If the pregnancy is beyond the sixth month, and the disease progressive, fully half of the mothers succumb in the near future. The mother's interests are paramount, and one gives the child but little consideration, especially since we know that even at term its prognosis is very poor.

Should the woman go to term, or in the case of operative interference, every precaution and care should be taken to spare the mother from strain at the time of delivery. She should be rested in bed, and fed up for a week or so be-

fore operation, the heart looked after and a course of digitalis given if necessary. The urine output should be stimulated and the bowels moved regularly. At operation the time element is to be reduced to a minimum consistent with careful work. Gas-oxygen anesthesia and analgesia during labor are most desirable. Chloroform is preferable to ether on account of the pulmonary irritation of the latter. Strict asepsis, avoidance of exposure, maintaining of body temperature and gentleness of operation are of utmost importance in the prevention of shock which is common in these unfortunates with their greatly lowered resistance.

TUBERCULOSIS IN GYNECOLOGY

Any attempt at an exhaustive discussion of all the phases of tuberculosis as met with in the practice of gynecology is impossible in this paper, so that only the more important features will be considered. So far as possible I will limit myself to the pelvis and its organs.

Pelvic tuberculosis is almost always secondary to tuberculosis elsewhere in the body, more often the lungs, and therefore causes predisposing to tuberculosis generally are factors in genital tuberculosis.

Genital tuberculosis varies in frequency, depending on peoples and locality, just as does the infection elsewhere in the body. The frequency with which it is found varies also with the care and regularity of microscopic examinations, which should be done in every case, and without which many cases are overlooked.

Previous irritation, especially such as occasioned by gonorrhea or puerperial infection is considered to be a predisposing cause of genital tuberculosis. Such preparation of the field is not necessary since we frequently see genital tuberculosis in virgins. Tuberculosis of the external genitalia is of the skin or mucous membrane of the vulva, and does not differ from this condition elsewhere on the body. The condition, though not common, is occasionally seen and superficial ulcerations resisting treatment and in which syphilis is excluded is probably tuberculosis. A small area may be excised for diagnosis, which is readily made microscopically.

The inguinal and obdurator glands are sometimes involved—usually singly and unilaterally. I can recall removing a semi-cystic tumor the size of a new-born child's head, from the major labia of a woman of sixty-five, which proved to be tubercular. It is interesting that the woman at the same time had a carcinoma of the clitoris.

The source of genital infection is most commonly through the blood stream or lymphatic channels, although not a few cases are by direct extension, usually from the peritoneum, involving first the tube. Even though the infection be by the blood stream both tubes are usually af-

fected, though one may involve some time before the other.

Tuberculosis of the abdominal peritoneum is not infrequently a source of tubal infection. In such cases the pelvic infection is usually overshadowed by the abdominal symptoms. Mayo believes in many cases the abdominal peritoneum may be infected from the pelvis, when, however, the condition is often more or less localized, and the pelvic symptoms are first observed and most marked.

The *Fallopian tubes* are by far the most frequently affected pelvic structures. They are involved in from 3 to 20 per cent. of all cases where salpingectomy is done for any cause. Williams found 6 per cent. of all tubes removed to be tubercular. Krönig found tuberculosis in over 11½ per cent. of all cases of chronic salpingitis, and in Cleveland I find 3 per cent. of all tubes removed to be tubercular.

The *ovary* is much less frequently affected, and is almost always secondary to the tube. Its involvement occurs in about 20 per cent. of tubal cases.

The *uterus* is very rarely the primarily infected pelvic organ, and is most often involved in a descending infection from the tube. The tube is usually first affected at its fimbriated extremity, the infection travelling slowly toward the uterus meets obstruction or resistance when it reaches the uterine portion of the tube or else the uterus itself is much more resistant to infection, as we might well believe on account of its simpler anatomical structure. On the autopsy table, Simmons found 65 per cent. of uteri involved when there was genital tuberculosis, but these were all late cases. Certainly not over 20 per cent. of the uteri are involved in our gynecological clinic.

In spite of the frequency of exposure through a tuberculous male, the *vagina* is rarely involved, showing a marked resistance to this, as to most other infections. In case of vaginal infection, the cervix seems to offer a marked barrier to a further ascending infection, the uterus usually escaping involvement from below.

Tuberculosis of the bladder is almost always secondary to that of the kidney. Infection of the urinary tract is much less common in women than in men, and when found in women is not often associated with genital tuberculosis, unless the patient is far advanced, and the condition general.

The symptoms and signs of genital tuberculosis vary markedly. Since this condition is usually secondary to tuberculosis elsewhere, signs of the infection are usually present from other parts of the body. Cough, loss of weight, hemoptysis, anorexia, nervousness, fever as well as the physical findings of pulmonary tuberculosis are the most common. The usual signs and symptoms of abdominal tuberculous peritonitis may be present.

When the disease involves the pelvic structures, especially if early, it will often entirely escape the attention of both the physician and the patient. Amenorrhea is common, especially when the condition becomes moderately advanced. This is the result of a rundown physical condition, caused by tuberculosis, and is not, as most of the laity believe, the cause of the tuberculosis. Menorrhagia and metrorrhagia are not infrequently seen, when the lateral pelvic structures are markedly involved, and the uterus becomes affected. In this respect, the condition acts like other pelvic inflammatory conditions. A leucorrhoeal discharge is common and often particularly irritating. Backache, pelvic pain and dysmenorrhea are common symptoms. Bimanual examination in early cases, with only slight tubal involvement will give no abnormal findings. Later on the tubes will be felt thickened and often nodular. As the condition advances, and the tubes become adherent, involving the ovaries, and masses form in the pelvis, they give an unusually firm, stone-like sensation on palpation, and the fixation is pronounced.

The *kidneys and bladder* when involved give quite definite findings. First the kidney presents its usual symptoms. There is frequency and usually hematuria, discomfort in the loin and along the course of the ureter is common. The bladder is secondarily involved and gives the usual picture of cystitis, which resists treatment. On cystoscopic examination, if the condition is confined to the kidney, the bladder is normal or slightly injected. Catheters should be placed in the ureters and the collected urine will show tubercle bacilli from the affected side, if they are carefully looked for. The bladder is first involved around the ureter of the affected kidney, showing a number of small ulcerated areas, which are quite typical. Early yellowish-white tubercles may be seen beneath the mucosa surrounding the ureteral orifice.

TREATMENT

The treatment will depend on the extent of infection and the organs involved. In all cases there should be rest in bed, forced feeding and general hygienic measures. The menstrual function is not to be stimulated in case of amenorrhea, since it is only a further drain on the patient's reserve.

In tuberculous peritonitis, the abdomen should be opened. Many discreet or confluent tubercles will be found studding the abdominal and visceral peritoneum. Adhesions may or may not be present. If so, they are best not molested. The mesenteric glands are enlarged. The free fluid should be evacuated.

The tube is first involved at its fimbriated extremity. Discreet yellowish white tubercles, a millimeter or so in diameter, are seen beneath the mucosa of the lumen. The fimbriae gradually shorten and assume a rosette appearance. As

the infection progresses the tube thickens, the distal end closes, and nodules are often seen along its course.¹ If, with or without involvement of the abdominal peritoneum, the tubes are involved, they should be removed, especially if distended. If they are very densely adherent it may be wise to leave them alone, as excessive damage may be done in removing them. One tube is usually involved before the other, but ultimately the infection is always bilateral. Therefore, if one tube be involved, the other should be removed, even though it appears normal at the time. I do not hesitate to remove one ovary if involved but prefer to leave at least the other.

If the uterus which should always be previously curetted at the same operation is involved, it may be removed, but about equally good results follow leaving it, since the uterine condition usually clears up following removal of the infected tubes. Mayo recommends removing the source of infection and as much as possible of the infected tissue which leaves so much less for the protective healing mechanism of the body to care for.

These abdomens should be closed without drainage, avoiding frequent subsequent fistulae. If, in separating the adhesions in the pelvis the

bowel is damaged which not infrequently occurs, these cases should be drained through the vagina. Wounds in these cases are very apt to break down, and are often months in healing.

When attention is directed to the kidney or bladder a thorough cystoscopic examination should be made. If the infection is found limited to one kidney it should be removed, as well as the ureter, if it be involved. The bladder usually slowly clears up completely after the infected kidney is removed. If both kidneys are involved, nothing can be done, except by appropriate local measures to make the patient as comfortable as possible. For the cystitis frequent warm irrigations of boric or saline solutions and installation of 10 per cent. argyrol as well as atropine or benzol benzoate by mouth will be healing and make the patient more comfortable during convalescence.

Skin tuberculosis of the external genitals should be treated by general measures and absolute cleanliness along with bland ointments. Exposure to sunlight for hours at a time is helpful and recently X-ray and radium have both been given credit for some excellent results.

465 ROSE BLDG.

A New Technique for the Radical Extirpation of the Penis*

Hugh A. Baldwin, M.D., F.A.C.S., Columbus

Editor's Note.—In developing a technique for the radical extirpation of the penis without invasion of the scrotum, Dr. Baldwin has succeeded in eliminating a source of trouble and infection. While Dr. Baldwin does not claim anything very remarkable for this technique, he does believe that it not only simplifies and shortens the operation but that it also minimizes the liability to profuse bleeding.

THE NEW TECHNIQUE

OF the making of new books, new instruments and new techniques there is no end. One hesitates therefore to present anything to a section of this character with the label "new" attached to it. He may be embarrassed by finding that it is so old that it has been forgotten.

The technique, which I present today, is not described in any textbook as far back as Gross' Text-book of Surgery, so I have some reason to believe that it may be new, even if not advantageous. All the textbook descriptions of the operative procedures in radical extirpation of the penis describe and illustrate the splitting of the scrotum as a requirement in this operation. I have found out, somewhat to my sorrow, that the scrotum is not always touched with impunity and that therefore, if a technique could be devised which would spare this tissue, it might be an advantage. With this idea in mind I worked out a technique in which the entire operation is carried out through the perineum.

The patient is put in the lithotomy position, the scrotum pulled up out of the way and the perineum incised over the course of the urethra. A sound can be introduced through the urethra, if considered desirable, but personally I have never found this necessary. The urethra is next freed from its bed between the two corpora cavernosa, caught with a hemostat, severed distally and the urethra with hemostat attached dropped to the posterior angle of the wound. By blunt dissection the roots of the corpora are separated from the surrounding structures. This is accomplished with great ease. A hemostat is then introduced at one side or even between them in the direction of the symphysis pubis. With the finger as a guide, this can be made to grasp the dorsal artery of the penis which is then severed distal to the clamp. With the scissors or the handle end of the knife, the roots are then detached from their insertion into the rami of the ischii. The penis is now entirely free from its attachment. The skin at the base of the penis is then cut, a circumcision as it were, and the penis lifted out from

*Read before the Section on Genito-Urinary Surgery of the Ohio State Medical Association, during the Seventy-Fourth Annual Meeting, at Toledo, June 6, 1920.

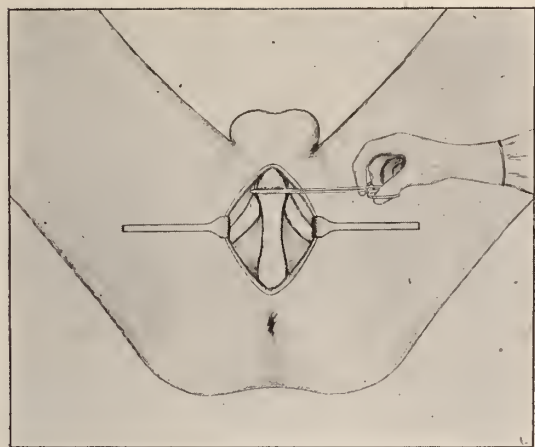


Fig. 1. Urethra freed and clamped.

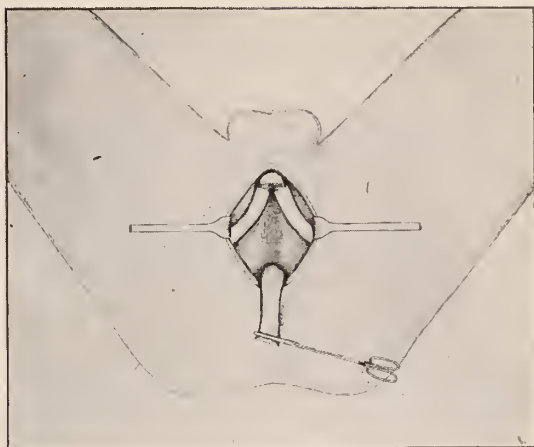


Fig. 2. Urethra severed and dropped to the posterior angle of wound. Corpora cavernosa cleared by dissection.

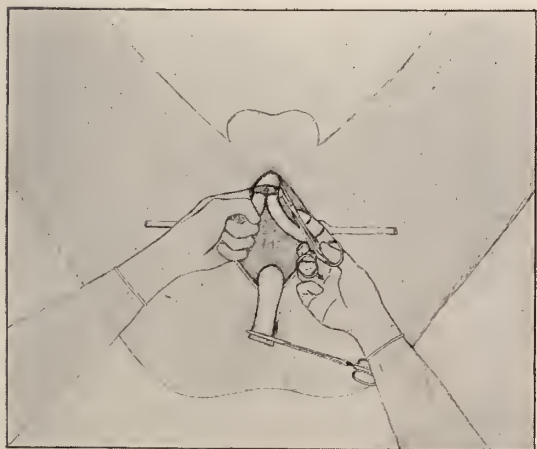


Fig. 3. After pulling the corpora cavernosa to one side, the dorsal vessels are clamped.

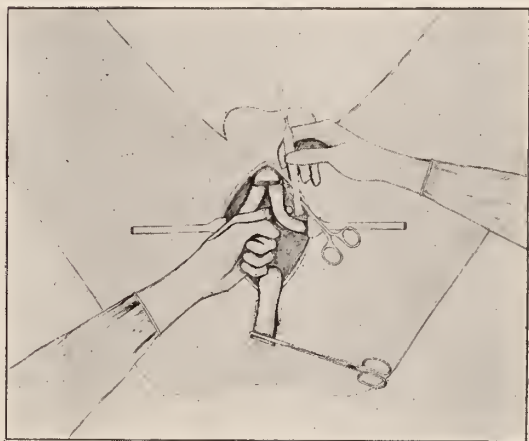


Fig. 4. After clamping the dorsal vessels the corpora are detached from their insertions.

behind forwards, thus avoiding any soiling of the wound.

The upper opening, where the skin at the base of the penis was cut, is now closed with one or two sutures. If there is any bleeding or any oozing it can be very readily controlled by clamps or packing through the perineal wound. The perineal wound is then closed with interrupted sutures of silk worm gut leaving a small drainage wick running up in the tunnel of the scrotum formerly occupied by the penis; the urethra is fastened into the posterior angle of the wound, a catheter introduced through the urethra into the bladder and held in place by a tight ligature thrown around the urethra just outside of the skin. After a few days the catheter is removed and the urethra trimmed off at the point of ligation, thus avoiding any disagreeable oozing. If considered advisable the inguinal lymphatics can be removed by the usual incision.

ALTERNATIVE PROCEDURE

As a variation from this routine, the base of

the penis can first be circumcised and the dorsal blood vessels caught, ligated and cut, then the patient can be placed in the lithotomy position and the operation finished through the perineum.

If it is decided that for the good of the patient's mental condition, castration is advisable at the same time, then of course there is no reason for following out this method.

I do not claim anything very remarkable about this technique. It is only a minor matter, but I do believe that it simplifies and shortens the operation and minimizes the liability to profuse hemorrhage.

347 E. STATE ST.

Rational Treatment of Pulmonary Tuberculosis, by Charles Sabourin, M. D., Medical Director of the Durtol Sanatorium, Puy-De-Dome, France. Authorized English translation from the sixth, revised and enlarged French edition. F. A. Davis Company, Publishers, Philadelphia. Price, \$3.00 net.

Obstetrical Gleanings for 1920*

Wayne Brehm, M.D., Columbus

Editor's Note.—The progressive steps as outlined in Dr. Brehm's resume, are those gathered from recognized medical journals and texts and most of them have been proved either clinically or in the laboratory, at least to the satisfaction of the various writers, although with Dr. Brehm, we cannot agree with all that is reported as final with only part of a year's time to prove results. It is only proper that obstetrics should be recognized as a major instead of a minor specialty in medical education since the average doctor will be called upon, in the beginning of his career, to use his knowledge of obstetrics far more than any other subject that has been taught him. Studies in endocrinology are opening a fertile field especially with regard to the use of corpus luteum and other extracts. Eclampsia is still the same debatable subject. Blood aspiration and transfusion are also finding a prominent place for themselves in both infantile and adult diseases associated with the postpartum state.

ANY branch of medical science as old and as mechanical as obstetrics, obviously will not have a great number of radical or Bolsheviki uprisings in a single year unless we believe, as some of our good brethren are attempting to teach us, that the millenium is near at hand and all females will soon be easily laying eggs, while the irascible males will be suffering the labor pains by having to keep said eggs warm.

A certain amount of gynecology and early pediatrics belong to the obstetrician, consequently we will include a few important facts as brought out by this year's research.

The progressive steps as outlined in this paper are those gathered from our recognized medical journals and texts and most of them have been proved either clinically or in the laboratory, at least to the satisfaction of the various writers, although we cannot agree with all that is given as facts with only a part of a year's time to prove results.

THE NEW HOPE IN HEREDITY

Fisher, of Cincinnati, sees a New Hope in Heredity. If we could take stock of our Mendelian inheritance and get our patients to do likewise and transmit our good character to our children and drop our evil traits, we could determine definitely whether our progeny would enter this world as liabilities or assets. Further, the winners of a new generation are the offspring of hard-working parents; the losers, the offspring of our best retired families.

These are vital problems to us all as Americans and especially to us as physicians, the physical and mental guardians of a country like ours.

ENDOCRINOLOGY

Endocrinology is and will play a very important role in obstetrics. Puberty is considered in its physiology and its pathology as an endocrine event in which the secretions of the genital glands, the hypophysis, the thyroid and the suprarenals take part as excitants of the sexual development while the thymus and the pineal act as inhibitors. The harmonious action, reaction

and interaction of the endocrine system determines the successful pubertal development; a disturbance in the balance results in the evolution of a pathological condition.

OBSTETRICS A MAJOR SPECIALTY

Much progress has been made this year in the teaching curriculums of the various colleges for medical students, in that a more intimate relation or co-ordination of obstetrics and gynecology is brought about. Educators are realizing that a divorce of obstetrics and gynecology would disrupt the whole medical family even down to the great grand-children, eye, ear and nose, etc.

They are planning to make obstetrics a major instead of minor specialty when realizing that 90 per cent. of all recent medical graduates will deliver a woman, for whom they would hesitate to open a post-tonsillar abscess or do a spinal puncture.

PRENATAL CARE

Physical education and the proper contraction and relaxation exercises for both mother and child are receiving some teaching time in an endeavor to raise the present longevity average of 48.7 yrs.

Not Christian Science, but common sense is teaching us the important role as played by a cheerful mind on a pregnant woman and the effect of sorrow and worry upon the internal glands is demonstrated beyond question.

Some special training of nurses or obstetrical attendants must be given as the average graduate nurse does not care for this kind of service and is glad when her hospital course in obstetrics is over.

Recent work upon post-partum morbidity has shown that as high as 60 to 70 per cent. is due to copraemia.

Twilight sleep, as such, seems to have passed beyond that tranquil, twilight Elysian state into dark night without even a nightmare and we are again using nitrous oxide and morphia.

Reduction in blood pressure seems to be materially aided by reduction of salt intake.

The gain in weight of a pregnant woman and fetus is not in proportion to her intake of food alone, and seems to simulate a neoplasm, i. e.,

*Read before the Columbus Academy of Medicine, December 20, 1920.

growth from an unknown cause. The average diet of a pregnant woman according to our latest information, being: 100 gm. albumin, 80-100 gm. fat and 400 gm. carbohydrate, (being mixed of course).

LABOR AT TERM

Pregnancy is not now permitted to go until nature is willing to interrupt it by starting labor. The hydrostatic bag is much more frequently used, which although contra-indicated in some cases, is a God-send in others. The advantages far offset the disadvantages when we know the actual duration of pregnancy has not been established, and estimations are never more than approximations. Gestations are frequently prolonged, thus giving a post-mature child, usually large and fat, of 4000 gm. or more in weight. Von Winckel says that 71.8 per cent. of all babies weighing over 4000 gm. are post-mature. These large babies lose much weight rapidly and therefore have no advantage over smaller ones. The length of child is determined by method of Ahlfeld, and the fact of bringing successfully into the world a large, heavy baby is no longer the family doctor's pride, for it has probably been done at the expense of the mother's health and subjected her to long and tedious ordeal. There is no disadvantage if the child is born a few weeks before maturity, but there is an ever-increasing danger to both mother and child when maturity has been passed.

Antityphoid vaccination of a pregnant woman does not seem to have any effect whatever upon either the fetus in utero or mother.

After manually or by forceps, rotating the head in persistent occipito-posterior position the same may be held from slipping back again posteriorly by grasping scalp with a doucle vulsellum or 8 in. artery clamp. With care there is no danger to the child.

Instrumental delivery is considered safer for both child and mother than prolonged unassisted labor.

A resume of abdominal pregnancy, with the fetus alive at time of operation, gives this year a maternal mortality of 24.6 per cent. and a fetal mortality of 45.7 per cent. when the fetus was of viable age.

CORPUS LUTEUM STUDIES

Recent work upon corpus luteum shows:

(1) An unabsorbed false corpus luteum prevents ovulation and is a common cause of sterility and that the expression or excision of such a false corpus luteum invariably brings on menstruation.

(2) That the excision or rupture of a true corpus luteum invariably results in interruption of pregnancy, at least during the early months, and that this may be looked upon as a common cause of abortion.

(3) That an injury to either the true or false

corpus luteum may simulate ruptured extra-uterine pregnancy.

The questions have been asked:

(1) Whether the liquor folliculi has a digestive action and if so does it possess a specific enzyme that can be demonstrated by dialysis or other tests.

(2) If it possesses such action, under what conditions is it altered? Is it decreased in pathological conditions?

(3) Can a quantitative estimate of its strength and amount be determined?

As the work is incomplete certain observations only are recorded:

(1) Ovulation is due to a specific enzyme, its nature being similar to the enzyme erepsin. Apparently there are other proteolytic enzymes in the liquor folliculi; also a lipase.

(2) Atresia of the follicles is due to this proteolytic enzyme or enzymes.

(3) That these experiments offer a rational explanation for the use of thyroid extract and corpus luteum in sterility.

A logical explanation for more frequent perineal lacerations is the intermarrying of mixed races which changes size and contour of fetal heads.

Pyelitis of pregnancy is usually of blood stream origin.

Crede's or Crede's modified method of expressing the placenta is losing its good repute this year, and we are drifting back to the attitude of watchful waiting.

Hypophysæal extract is still greatly used, in fact, there is at present a scarcity of this product on the market, but our dosage has diminished to a few drops when we realize the rapid complications which occasionally arise and cannot be adequately met even in our well-equipped hospitals.

Only a partial belief in focal infections should be sufficient to remove all such foci possible in the pregnant woman.

ECLAMPSIA

These notes would not be complete without mentioning eclampsia, a subject upon which many diverse opinions exist regarding its etiology and treatment. The following are recent advances and you may take them at their face value:

(1) The problematic relationship between mild and profound toxemias of pregnancy warrants a study of the former in order to gain information regarding the latter.

(2) The development of a course of treatment, the success of which seemed to depend on the use of carbohydrates in large amounts, led to the assumption that a deficiency in carbohydrates has an important bearing on the origin of the toxemia of pregnancy.

(3) Carbohydrate deficiency during pregnancy is of twofold origin; (a) a relative deficiency due to an unexpected demand for glycogen on the part of the fetus in the uterus, and (b) an

actual deficiency augmented in the presence of nausea and vomiting, from lessened carbohydrate intake.

(4) Carbohydrate deficiency in the maternal organism causes a glycogen depletion of the liver, because this is the organ in which carbohydrates are stored for use as needed.

(5) There is experimental evidence to show that liver function is impaired and the body flooded with toxins after carbohydrate starvation.

(6) Pathologic changes in the liver lobules which are similar to those of fatal toxemias of pregnancy can be produced experimentally by the use of certain chemical poisons. These changes can be made to disappear rapidly by the ingestion of carbohydrates.

(7) Mild cases of nausea and vomiting may be controlled by so regulating the diet that there is a preponderance of carbohydrates, and an avoidance of more than short intervals of fasting by the taking of food more frequently than under ordinary circumstances. This increased carbohydrate intake should be augmented by giving the patient from 8 to 16 ounces of 10 per cent glucose and 2 per cent. sodium bicarbonate solution daily by mouth. This may be given in 1 or 2 ounce doses.

More severe cases require more rigid attention. After an initial period of rest, gastric lavage and the introduction of saline cathartics through the stomach tube, small amounts of liquid food are allowed alternately with from 1 to 2 ounce of the glucose and soda solution, described above, every two hours. By mouth or by bowel it should be possible to give the patient 1 quart of this solution daily.

In the seriously toxic patients the treatment is pushed even more vigorously with the addition of intravenous injection of from 15 to 25 gm. of glucose in from 250 to 300 cc of water. This is given from one to three or more times daily, according to the needs and response of the patient.

(8) Not only is intravenous injection of glucose solution a valuable therapeutic measure, but the rate of its absorption and storage by the liver is an index of liver efficiency which is of prognostic value. More rapid storage than normal is favorable because it indicates that the liver, depleted as it has been of glycogen, is nevertheless still able to restore itself. Storage which is slower than normal offers an unfavorable prognosis, since this is evidence that liver efficiency is impaired.

Another writer sums up the following points in treatment:

(1) Do not fail to prevent eclampsia.

(2) Do not fail to examine the urine at least four times at the end of each of the last four months, and if albumin is present put the patient on a milk or vegetable diet; give sodium bicarbonate and laxatives and keep the patient warm, in bed if necessary.

(3) If a convulsion occurs, do not give chloral or chloroform or veratrum viride, or employ venesection.

(4) Do not allow pregnancy to continue when it is known that brain and kidneys are being irreparably damaged.

(5) Do not forget that accouchement forcè, vaginal Caesarian section, and craniotomy, in the interests of the mother as well as of the child are no longer justifiable.

(6) Do not forget that abdominal Caesarian section performed by an experienced operator is one of the safest operations in surgery for the mother, and that it enormously increases the chances for the child if performed after the end of the seventh month when the child is viable. In one of the latest works on obstetrics De Lee says that a well-known operator had reported 550 cases of eclampsia operated on within one hour of the first convulsion without a single death.

(7) Do not forget that the best time to operate is before labor begins, and before the woman has been examined by an ungloved hand. The few deaths which now occur are due to infections of the uterus.

(8) Do not look upon eclampsia as a one-man case. There must be three doctors and a good trained nurse if every case is to be saved. If the proper conditions cannot be obtained at her home, it is better to send her to a good obstetric surgeon at a good hospital where there is plenty of morphine.

Another writer says:

(1) Surgical intervention should be restored to in the treatment of eclamptic anuria after the usual methods, uterine evacuation or copious bleeding have failed.

(2) The operation of choice appears to be nephrotomy with pelvic drainage and decapsulation of the kidney.

(3) When pronounced oliguria is associated with a poor general condition and signs of uremia and when there is complete anuria the best results may be expected from early operation. The clinical aspect of the case will be the most reliable guide as to the time to operate.

CONSERVATIVE VS. RADICAL TREATMENT

Conservative and radical treatment are compared thus: "No matter what causes eclampsia, it is the convulsions that kill, or do the serious damage. If they can be prevented, or quieted, nature will cure the eclampsia, or whatever produces it." This is the central idea of the Stroganoff treatment. The immediate or precipitating cause of the convulsions is some local or transient excitant. Therefore, the first object in treatment is to remove, so far as possible, every peripheral or other excitant. If the patient is in a convulsion when first seen, give her at once at least a half-grain of morphine hypodermically. If she is not in a convulsion, but has been or appears to be on the verge of a seizure then chloroform

is given in the smallest possible quantity that will enable one to give, without disturbance, the first hypo of morphine, to make any examination necessary, or to do venesection if that is immediately urgent. The next step is to darken the room and secure absolute quiet, for even light and noise may excite convulsions. In about one hour 30 to 40 grains of choral hydrate is given by the bowel. In another hour (or two hours from the first dose) the second hypo of morphine is given. Alternate doses of chloral and morphine are then kept up at such intervals and in such amounts as appear necessary to control the convulsions and quiet the patient. If in spite of this treatment convulsions continue (which they will in a certain small percentage of cases), then the uterus must be emptied.

If the convulsions are thus controlled, which it is claimed they are in a large majority of the cases, then the pregnancy is not interrupted, but allowed to go on a month, more or less, as the case may be, to delivery at term.

It will be noted that this program leaves no place for the stomach pump, for active purgation, or for hot packs, or other methods of sweating. The only immediate means of elimination is by venesection, which is done freely and until effective on the blood pressure. Sweating might not be inconsistent with this program of quiet and non-interference, but it is absolutely contraindicated, according to this school, on the ground that the toxins are already in too concentrated a form, and that sweating increases this concentration, by removing much water from the tissues, with but a negligible quantity of the toxins.

Washing out the stomach cannot be successfully accomplished, it is claimed, without greatly disturbing the patient at a time when the whole aim is to prevent all disturbances. Purg-ing could only remove the gastrointestinal toxins and not the specific toxins of pregnancy, and would also deplete and weaken and disturb the patient, when absolute quiet is the thing sought for. Likewise any attempt to induce labor, to dilate the os, to apply forceps, or to interfere in any way with the natural process of emptying the uterus, would, according to the Stroganoff idea, be prohibited on the ground of its being a violent excitant, liable to cause convulsions, and to shock and weaken the patient.

So much for the conservative idea.

In the English maternities, and very largely in American institutions, there are those who wholly or in part reject the Stroganoff methods, and maintain that since we have no rational treatment for eclampsia there is but one thing to do, and that is to terminate pregnancy as quickly as possible, and thus remove the direct or indirect source of the toxins that cause convulsions.

Accouchement forcè, therefore, including vaginal or abdominal Caesarian section, or if not so urgent as this, some of the slower methods of

opening the uterus, along with the most vigorous methods of elimination by bowel, skin, and kidneys, practically sum up the radical treatment.

A point on *post-eclamptic pneumonia*:

Of particular importance in preventing aspiration of saliva or vomitus and asphyxiation, due to swallowing the tongue, is the posture of the patient. Tweedy insists that the patient be left constantly on the side, that salivary accumulation escape to the surface, and believes that two of the cases for which he was responsible but which he did not see throughout, died of asphyxiation. When one considers the frequency of post-eclamptic pneumonia, it is possible the neglect of this simple preventive measure is at fault.

Blood transfusion of course is never to be forgotten.

Some form of state insurance is being talked of, in which either married or single pregnant women may be insured against loss of life, loss of time, or the usual dangers concomitant with pregnancy and labor.

ABORTION

Conservative treatment of abortion is summed up as follows:

(1) Cases of septic abortion should receive no local treatment until they are at least 5 days' fever-free; the one exception being hemorrhage that threatens life.

(2) This nominal period converts a septic case into a so-called non-septic, which has fewer days of fever, a shorter stay in the hospital, fewer complications, and a lower mortality.

(3) So-called non-septic cases should be curetted as a routine for: (a) 40 per cent. of expectantly treated cases have to be curetted; (b) Curettage insures an empty uterus and prevents subsequent bleeding; (c) It shortens the stay in the hospital; (d) This procedure is relatively harmless in comparison with the good it accomplishes.

PREGNANCY AND INFLUENZA

Pregnancy complicated by influenza for this year compared to 1918 and 1919:

(1) The maternal mortality was about the same as in the epidemic of 1918-19.

(2) The mortality and morbidity, while small in cases of influenza, was much greater in those complicated by broncho-pneumonia.

(3) The incidence of abortion and of pneumonia is greatly decreased by keeping the patients in bed, from the time the diagnosis is made until recovery is complete.

(4) Abortion is caused by toxemia, or insufficient available oxygen in the maternal blood, with physical exertion as a contributory factor.

(5) The virulence of the epidemic decreased steadily and markedly.

ENDO-CERVICITIS

Recent work on endo-cervicitis and its cure can be summed up as follows:

"Chronic endo-cervicitis is primarily and essentially an infection of the deeply-situated, terminal tufts of the endo-cervical muciparous glands. These glandular sacculi harbor the infecting organism for years or a life time."

"To cure endo-cervicitis we must remove the entire infected area of endo-cervical mucosa; as long as endo-cervicitis persists, so long will its symptoms persist."

The cure of chronic endo-cervicitis demands:

(1) Complete enucleation of the entire endo-cervical mucosa from the external to the internal os with preservation of the muscular structures.

(2) Accurate relining of the denuded cervical canal by a cylindrical cuff of its vaginal sheath.

THE POST-PARTUM BABE

A few brief hints regarding the post-partum babe:

(1) The luetin test is more reliable in congenital lues than the Wassermann.

(2) At least 65 per cent. of congenital luetics will react positively to the test.

(3) It causes no constitutional reaction.

(4) It is more important to do a routine luetin test in the clinic than the von Pirquet test, providing the material can be obtained.

BLOOD ASPIRATION AND TRANSFUSION

(1) In the study of infantile diseases, blood is frequently needed for cultural or biochemical studies. In the past it was difficult to procure.

(2) Intravenous therapy in infantile as in adult diseases is coming to play more and more prominent roles. Because of the small superficial vessels in infants it has been difficult to pursue.

(3) The superior longitudinal sinus is a relatively large vessel, very near the body surface. Its walls are resistant; it is not readily displaced, and it does not occupy anomalous positions. The average distance of penetration to enter the sinus is from $1/4$ to $5/16$ of an inch. The average diameter of the vessel at the anterior portion of the fontanelle is $3/32$ of an inch; at the posterior angle $4/32$ of an inch; and one inch along the suture, often open, $5/32$ of an inch. It is, therefore, advisable to enter the needle at the posterior angle of the fontanelle or through the suture just behind it. It is averred that there are no anomalies in the position of this vessel. More than this, just as the median cephalic vein of the adult patient is rendered tense by the tourniquet applied to the arm, so is the superior longitudinal sinus made tense when the baby cries. Again, as the needle enters the sinus the operator detects an immediate diminution of resistance, much as he does when the lumbar puncture needle pierces the spinal dura.

(4) *A priori*, therefore, it would seem to be

the ideal vessel to enter, when blood is needed for laboratory investigation, or when intravenous therapy is required.

(5) Apparently little danger is incurred in making sinus punctures or injections into blood-streams.

(6) No one should puncture a baby's fontanelle without a due sense of responsibility and without a knowledge of method and of surgical cleanliness. Lumbar puncture is a relatively simple and safe procedure, and yet accidents have occurred (hemorrhage into the cauda equina, in brain tumors and in the presence of brain abscess). The mere fact that we possess an important avenue for blood studies and for injection into the blood stream should make us guard the method with sedulous care, and should save us from recklessness in its advocacy or in its use.

The research field, the progressive arena for 1921, is about to be entered by Medical Science, so let us hope we may make more progress, may have more original ideas and aid humanity more as the New Year passes forever onward.

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NEW AND NONOFFICIAL REMEDIES.

Acriflavine-Heyl—A brand of acriflavine (see New and Nonofficial Remedies, 1921, p. 22). Heyl Laboratories, New York.

Ampoules Pituitary Liquid-Armour 0.5 Cc.—Each ampoule contains 0.5 Cc. pituitary Liquid-Armour (see New and Nonofficial Remedies, 1921, p. 222). Armour & Co., Chicago, Ill.

Calcium Cacodylate-IPCO—A brand of calcium cacodylate (see New and Nonofficial Remedies, 1921, p. 50). Intra Products Co., Denver, Colo.

DuBois Iodoleine, Injectable, Ampoules, 2 Cc.—Each ampoule contains 2 Cc. of DuBois Iodoleine (see New and Nonofficial Remedies, 1921, p. 153). David B. Levy, New York.

Tincture of Digitalis Fat-free-Squibb—A biologically standardized fat-free tincture of digitalis corresponding in drug strength to the U. S. P. tincture of digitalis. E. R. Squibb & Sons, New York, Jour. A. M. A., March 5, 1921, p. 655).

Solution Arsphenamine-Lowy 1 per cent.—An aqueous 1 per cent. solution of arsphenamine, possessing the proper degree of alkalinity. The solution is supplied in ampoules containing 40 Cc. (0.4 Gm. arsphenamine) and 60 Cc. (0.6 Gm. arsphenamine). These ampoules should not be used after the date stamped on the label of each package or if the degree of coloration of the solution is greater than that of a control tube which accompanies the package. A sterile needle for intravenous injection and sterile rubber tubing accompanies each ampoule. The Lowy Laboratory, Inc., Newark, N. J.

Radium's Place in Therapy

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Editor's Note.—Radium therapy is coming into such general use in the treatment of so many conditions that Dr. Strauss stresses the advantage of the General Practitioner becoming acquainted with the possibilities and limitations of this newer method of controlling and curing many malignant conditions. Dr. Strauss describes the various modes of using radium and the efficacy of the three types of rays. On account of the difference in susceptibility the alpha, beta and gamma rays are used to treat certain specific cellular pathology. The groups of conditions amenable to radium therapy are many and embrace some in which radium alone is curative and others in which it is best associated with operative procedures and X-ray treatments. Dr. Strauss details these considerations and is conservative both in his claims of results and in his suggestions for treatment.

ALTHOUGH radium has so well proved its value as a therapeutic agent that its use has become the method of choice in certain conditions, yet the great majority of the medical profession is not aware of the varied fields in which it is of service, what to expect of it, and how it is applied. Therefore in order that the practitioner may be acquainted with such facts, that he may tell his patient what to expect and how long he may need treatments and how the treatments are given, the author is submitting this article.

Furthermore, the number of cases of carcinoma, that have appeared for treatment lately, is so large that it seems opportune that the profession should be urged to be on the lookout for suspicious cases, to diagnose them early and see that the patient receives proper treatment. Many times the patient dates back the onset of the ulcer of the face or lip or tongue many months. When asked why he did not go to a doctor sooner he will reply that he went and the doctor treated him for several months with salves and solutions. And again a patient will appear complaining of hematuria, and have a large carcinoma of the bladder. He too will relate that he went to his doctor for many months and his doctor gave him pills, instead of realizing that it was of the utmost importance to have a cystoscopic examination. Then the patient will ask how he was to know that the physician was wrong. There has been carried on a propaganda for the laity to acquaint them with the early signs of cancer. Now it seems high time that the profession itself should heed the warnings and educate its own members and take some steps to see that neglect is not tolerated.

FORMS AND METHODS OF USE

Radium is used in the form of insoluble sulphate except by those who possess more than a gram. In such cases the emanations are used. The latter is a gas from radium bromide in solution, collected under mercury and forced by pump into capillary tubes. The emanation has one essential difference from the element and that is its instability. The emanation gradually loses its energy so that in a few days it is inert. It has been estimated that one millicurie gives off in its lifetime the equivalent of 132 millicurie hours.

These fine capillary tubes containing the emanation may be used either in packs or by being buried directly in the tumor. They are introduced by a hollow needle from which they are pushed by a plunger. When the element itself is used it is in a glass container varying in size with the amount and the purity of the salt. This in turn is inclosed in a metal capsule employed as a filter to absorb the soft, burning, nonpenetrating rays. Gold needles with iridium points are also used to encase the element. These may be imbedded like the capillary emanation tubes. However these must be withdrawn when the desired dosage has been given. Another form is the plaque which has the element equally distributed over its surface and is used in small amounts for skin conditions.

The rays from radium are likened to those from the Roentgen tube. They are of three kinds. The *alpha* ray is absorbed by the glass container and therefore never enters into therapeutic consideration. The *beta* rays are one hundred times as numerous as the *gamma* rays and nearly absorbed by 0.5 mm. of silver. These are used when the lesion to be treated is superficial, but cannot be used when the lesion is covered by skin or mucous membrane, because under such conditions the covering tissue would receive a burn before the lesion would get sufficient rays. This is due to the fact that beta rays do not penetrate deeply and are absorbed by the superficial tissue. The shorter the wave length, the harder and more penetrating are the rays. And of all the rays considered, the *gamma* rays are much the shortest.

Besides the primary rays from the element there are secondary rays which take their origin from the metal filters through which the primary rays pass. The *secondary gamma* rays are like the soft beta rays, and are absorbed by rubber tube from 2 to 3 mm. thick. The intensity of radiation like that of light varies inversely with the square of the distance between the radium and the tissue. In computing the intensity of radiation a tumor receives, the thickness of the overlying or intervening tissue must also be taken into consideration as part of the distance. In order that the lesion gets sufficient radiation the radium is placed at a great enough distance, thus preventing the other tissue from being destroyed. For example, if the intensity

at 1cm. may be called one hundred units, at 2cm. it will amount to one hundred fourths or twenty-five units, and at 5 cm. it will amount to one hundred twenty-fifths, or four units.

The unit of measurement of dosage is a milligram applied one hour and called one "milligram hour, (mghr)." If the emanation is used it is called "millicurie hour, (mchr)."

CELLULAR REACTIONS TO RADIUM

Different kinds of cells vary in their sensitiveness to radium, from the most sensitive to the least sensitive, in the following order: Lymphosarcoma, basal cell carcinoma, cubocell carcinoma, uterus, skin. The more scirrhus a cancer, the more resistant it is.

Ewing has described in detail the changes that tissue exposed to radium undergoes. From three to five days after exposure there can be seen a hyperemia of the tissues, beginning exudation of lymphocytes and a swelling of all cells. In the second week the tumor cells show a characteristic appearance. The nuclei are swollen, homogeneous, and hyperchromatic. The cells are loosened; hydropic vacuoles are seen in the cytoplasm and fusion giant cells form. In the third week the number of cells is greatly reduced. Some liquifaction necrosis is present. Other cells are invaded and mechanically broken or compressed by lymphocytes and proliferating stroma. In the fourth and fifth weeks only pycnotic nuclear material or occasional giant cells remain. In the meantime the stroma is active. Leucocytes are over-abundant, capillaries proliferate actively, the stroma is transformed into granulation tissue, and tumor cell nests are excavated. The later stages are marked by gathering of leucocytes, lymphocytes, plasma cells and polyblasts which may be profuse and are specific. Eventually the site of the tumor is occupied by granulation tissue, and epithelium grows over the denuded area.

As a general guide it may be stated that except where growth is so situated that needles containing radium may be inserted directly the capsules are employed with proper filters and at computed distances for certain lengths of time. The needles resemble straight thick sewing needles, 1.42mm. in external diameter, and 28.2mm. long. When possible as in lesions of the tongue, lip, larynx, cervix, etc., the needles are imbedded with a strong thread attached and left in place the required length of time. This is the best and most efficient method. A more detailed picture will be gained from the descriptions of the treatment of the individual lesions in the following pages.

GROUP OF CONDITIONS AMENABLE TO RADIOTHERAPY

The affections amenable to radium may be divided into five classes:

(1) Those in which radium is the method of choice.

(2) Those in which radium is to be used in conjunction with surgery.

(3) Those in which radium has given relief, but in which more experience is necessary before advocating its use above other methods.

(4) Those in which radium is only palliative.

(5) Skin diseases.

Group I.

(1) Lymphosarcoma.

(2) Hodgkins disease.

(3) Sarcoma of the extremities.

(4) Fibromyomata of uterus uncomplicated and not enlarged above the umbilicus.

(5) Menorrhageas.

(6) Carcinoma of the cervix uteri.

(7) Carcinoma of the face.

(8) Obstructing thymus in infants.

(9) Keloids.

(10) Epulis.

(11) Nevus (hemangioma).

(12) Vernal catarrh.

Group II.

(1) Carcinoma of the fundus of the uterus.

(2) Carcinoma of the breast.

(3) Carcinoma of the prostate.

(4) Carcinoma of the bladder.

(5) Carcinoma of the rectum.

(6) Orbital tumors.

(7) Glioma of the brain.

(8) Carcinoma of the jaw.

(9) Carcinoma of the tongue.

(10) Carcinoma of the lip.

(11) Carcinoma of the antrum.

Group III.

(1) Leukemia.

(2) Corneal ulcers.

(3) Toxic goiters.

(4) Tumors of the tonsils.

(5) Tuberculous adenitis.

(6) Carcinoma of the larynx.

(7) Carcinoma of the esophagus.

(8) Leukoplakia.

Group IV.

(1) Advanced inoperable growths.

Group V.

(1) Skin diseases.

GROUP I.

When radium was first put on trial to establish its usefulness in healing, it had to do so by curing inoperable conditions or lesions that no branch of medicine could relieve, and it won triumphantly, so that today it is approved as the choice in some lesions. And having won, radium deserves a better opportunity. It deserves to be given a chance at the onset of the disease. In this way infinitely better results can be expected. This will become evident in the rest of this article, and then it will be shown that the editor's note to Dr. Frank Warner's paper, "*Some Surgical Aspects of the Cancer Problem*," (*) stating, "Radium is prop-

(*) Ohio State Med. Jour., Sept., 1920, p. 645.

erly reserved for inoperable cases" is wrong. Dr. J. G. Clark stated that he would rather do without his right arm than to be deprived of his radium and continue in surgery, because he realized that it would mean, he might not be fair to the patient. A surgeon may be able to advise justly when he has both radium and surgical skill, and thus not operate when radium will serve instead.

Lymphosarcoma and *Hodgkins Disease* head the list in Group I. Whether the tumors are in the glands of the neck, axilla, or mediastinum, they can be made to disappear and the patient be improved in health. True that tumors may reappear in nine months, but nothing has been found to give such relief. Treatments may be repeated several times for such recurrences before the disease becomes absolutely resistant to radium. Thus several years can be added to a patient's life. These treatments are given by the element or emanation, contained in a lead box separated from the skin by padding and then moved over the tumor at regular intervals so that the whole mass is given an even radiation of big doses. This takes time and therefore the patient remains in the hospital until the treatment is completed. Furthermore large doses of 3000mghrs. or more, often cause nausea and even vomiting and may cause a rise in temperature. When the reaction is over the patient goes home and returns in three or four weeks. A marked diminution in the size of the tumor will be noted at the end of the first month. Treatment should be continued at longer intervals after the masses have subsided.

Not only is there a distinct operative risk in amputation for *sarcoma of the extremities*, but the percentage of recurrence is high, and that of cures extremely low. Statistics show that patients operated on for sarcoma of the extremities have shorter life than if left alone. Better results have been obtained by excision in the giant cell type and by Coley's toxin in other types, and lately by radium in quite a few cases, than by radical operation. Although the results with radium therapy in bone sarcomas are still under scrutiny, they are so promising that they warrant urging the profession to use radium as soon as the diagnosis can be made. At the General Memorial Hospital in New York radium has become the method of choice for these lesions. Bissell reports a case of sarcoma of the femur relieved and two of the humerus not improved. Schmitz places osteosarcoma among the more resistant tumors.

Furthermore, the most striking symptoms in cases of sarcoma of bone as well as of metastases to bone of carcinoma are pain and tenderness. These usually appear before any definite diagnosis can be made. Radium gives relief from these within twenty-four or forty-eight hours even in well-advanced cases. The author is treating now a case of carcinoma, involving the

head, neck and shaft of the femur, the ilium and fifth lumbar vertebra with great satisfaction. The patient after four treatments is able to sit in a chair, whereas for sixteen weeks before treatments were started she had been bed-ridden and could not endure the slight touch on her leg. Her first treatment consisted of external packs, intravaginal application and needles imbedded into the mass in the soft parts which extended above Poupart's ligament. This mass has disappeared. The X-ray pictures show the improvement in the bones involved as new bone is being deposited to replace the tumor.

Radium has several advantages in certain *uterine conditions*. Although the mortality for *hysterectomy for fibroids* is low, even that chance is cancelled by radium therapy. There are cases that have had such severe hemorrhages that the patient is so exsanguinated she needs a transfusion before operation. Such a case would require nothing but radium. Fibroids in a tuberculous, cardiac or nephritic patients are other examples. The hospital stay of the patient is shorter, no nursing is necessary and less time is lost to the patient. Therefore radium therapy is not more expensive than operation and should be within reach of all classes. The only argument that can be used against radium is that hysterectomy preserves the ovarian secretion, while radium causes the menopause. Absolute contra-indications to radium therapy are necrosis of fibroid, adherent uterus and diseased adnexa.

The *technique* is simple. The patient is prepared for operation in the usual way. A diagnostic curettage is done and the radium is inserted in a filter of 2mm. of lead or its equivalent, and a rubber tube 2 or 3mm. thick. This is fastened to braided silk passed into the fundus of the uterus and left until 700-1000mghrs. are given. The author prefers 100 mg. for 10 hours. Externally the pack is applied to get about four gmhrs. This is generally sufficient to cause a menopause. The treatment can be repeated once or more at intervals of three months to maintain amenorrhoea. Usually two treatments suffice. Fibroids show marked decrease in size after two months, some much more gradually. The curettage does not need to be repeated, and often a second introduction of the radium can be done on a sound and without narcosis, in which case the patient would be in the hospital twenty-four hours. There have been very few failures by this method. A fibroid uterus enlarged above the size of a six months' pregnancy in a good risk would probably be dealt with best by surgery.

Menorrhageas in young women or in older women near the menopause with a *fibrosis uteri* may be dealt with similarly. But here the dosage is different. In the former it should be 300 or 400 mghrs. at first, and repeated after three months if necessary in order to reach only a temporary amenorrhea. In the latter class

the large dose is employed. There are many cases where a short amenorrhea has been induced and the patient returned to a normal flow and even became pregnant. These cases are usually the type that are curetted a great number of times till hysterectomy is finally resorted to. Now radium saves that. Stacy* reports on 143 out of 175 treated, 93 had had curettage; menstruation ceased in 55; ceased for three months in 15; became normal in 29; became regular but profuse in 42; became profuse in 30.

Patients having intrauterine treatment should be told that their next period may be profuse and that they will have a leukorrhea in the second month after treatment.

If the diagnosis is *carcinoma of the fundus* the radium should be left in the uterus till a dose of 1200 mghrs. has been given, the radium packs put on the outside and operation performed in two weeks. If a longer time elapses scars may form which would be an obstacle at operation. Radium should be used intravaginally in large doses after operation. In borderline cases radium alone should be used.

The author believes that *carcinoma of the cervix* when operable is better treated by radium than by surgery, because of the great mortality in Wertheims operation and because radium will reach as far as the knife. It is best to imbed the needles around the edge of the growth and lay the capsule against the lesion. The rectum and bladder must be protected by lead plates and packing. Keeping both empty gains distance and therefore protection. The dose is about 3000mghrs. for a treatment and should be repeated in three or four weeks.

The great advantage in treating *carcinoma of the face* with radium is the freedom from scars and deformities. This is of the utmost importance when the growth is on or near the eyelid or about the mouth. As a rule, carcinomas situated above the angle of the mouth are of the basal cell type and do not metastasize. X-ray or desiccation methods often cure but when they fail radium may cure. On the other hand, if radium fails, the other methods will not cure, thus showing conclusively that radium is more efficient. Usually two or three doses are enough. The first doses should be heavy using some beta rays, and should be given one week apart. Results will begin to show in two weeks and then treatments may be postponed for a month. Further treatments will depend on the reaction and the patient should be carefully watched and followed.

The *obstructing thymus* in infants has been relieved by X-ray, but it has been found much more regularly helped by radium. With radium applied in a lead box, 100mgs. at a distance of one-half inch for two hours over each of the four sites, or portals, relief can be given. The

greatest advantage over X-ray is that one does not have a struggling child to deal with.

Keloids are susceptible to radium but one must be prepared to take from three to six months, depending on the surface size and thickness of the keloid to get a good result. The quickest effects are obtained by producing a slight burn, although that is apt to leave telangiectases in the scar. They are best treated by an hour's exposure with 100mg. or more.

Epulis is very amenable to radium, one or two doses of 300-600 mghrs. sufficing. If the lesions are large enough they are best treated with the needles which can be inserted under novocain.

Angiomata, like keloids, require careful, painstaking application in order to get good results. One must have a uniform distribution of the radium over the surface, and when dealing with infants one must remember that the skin dose is much less than in adults. The portwine type does not give good results.

All reports on *vernal catarrh* agree that at last a cure has been found for this painful, stubborn malady. Janeway uses radium deposit placed next to the eyelid, and protecting the eye, applies 50-100mc. for four minutes to each lid. Pusey, Butler and others use the element in amounts varying from 10-100mg. for fifteen minutes from two to eight times depending on the dose. The technique with the element is to cocaineize the eye, evert one lid at a time, hold it with a lid retractor, and then hold the radium in its capsule of 0.5mm. of silver or in a plaque, in contact with it for the necessary number of minutes.

GROUP II.

The outstanding examples of radium used as the handmaid to surgery are *operable cases of carcinoma of the fundus uteri and of the breast*. The former should have treatment before and after the operation, and the latter after operation. The intra-uterine treatment and external treatment are done as in cases of fibroids but in larger doses. Operation should be performed in from two to three weeks after the radium is given and radium therapy resumed when all wounds are healed. Inoperable carcinomas of the breast belong to Group IV.

Barrenger has several cases of *carcinoma of the prostate* alive and well more than five years. The treatments are given by inserting a needle bearing radium through the perineum and leaving it so that one lobe gets about 200 mghrs. Further treatments depend on the reaction. Barrenger has found that if the main trouble is retention, biting away some of the prostate at the internal sphincter and then inserting radium from the suprapubic section, will prevent the neck from closing again and therefore relieve the retention. All such tumors may be treated as ambulatory cases, unless the suprapubic section has been necessary, and then the patient

(*) Minn. Med. J., Vol. II., 88, 1919.

may remain in the hospital. Treatments are usually repeated in three weeks. The needles are inserted after a local anesthetic has been injected. A general anesthesia is dangerous because during the restless state when the patient is regaining consciousness the needle carrying the radium is apt to be broken. The author has used successfully similar technique to imbed radium in a tumor filling the hollow of the sacrum, i. e. by pararectal injection of 2 per cent. novocain; and by infiltration through the perineal body for a tumor between the rectum and vagina in a woman who had had a supravaginal hysterectomy.

Malignant tumors of the bladder are rarely cured by operation, probably because the diagnosis is generally made late. Radium therapy should certainly take the place of transplantation of the ureters. Radium should be used after operation within the bladder and externally. The best way to treat the tumor is to insert the radium directly into the growth. When the element is used, this must be done by a cystotomy, and when the emanations are used it may be imbedded through a cystoscope. The element may be applied in lead filters inclosed in rubber tubes, by inserting it through an endoscope, or by holding it by a modified cystoscope such as Young has devised. This treatment will extend over several months in order to procure the destruction of all malignancy and avoid burns.

A good prognosis in the treatment of *carcinoma of the rectum* can be given if the growth is not too far advanced. Furthermore, operative results are bad if the operation is a mutilating one. Generally an artificial anus must be made, and often patients refuse operation on this account. The only problem of treating these growths with radium is the technique. The author prefers when possible to insert the radium needles directly into the growth through the proctoscope. This is easily done with the patient in the knee-chest position. It is difficult to place and maintain on the surface of the growth a radium capsule, and at the same time protect the normal mucosa unless one is dealing with a circumscribed growth. Then it may be well to use one or more capsules depending on the length of strictured area.

These treatments are given so that the tumor of usual size receives 1000mghrs. And the treatment is repeated in three or four weeks. In six months one should find a marked retrogression, nearly to the disappearance of the tumor. Carcinomas of the rectum are apt to leave a smooth fibrous scar which may amount to a stricture. Better results are obtainable when a colostomy has been made, because then the reaction will produce pain but not tenesmus.

Another class under Group II. is *orbital tumors*. Most reports agree with the experiences and conclusions of Janeway. Recurrences after operation do so well that better results

may be expected if the cases could be treated sooner with radium. Choroidal and intra-orbital tumors should be enucleated and radium used postoperatively. 1000 mghrs. to the orbital cavity should be given.

With *epibulbar and iris sarcomas* radium may be tried first till the limit of safety for operation is reached. If the tumor continues to progress to this limit, then operate and use radium postoperatively. Finzi reports complete retrogression of a twice recurrent sarcoma of the orbit after three treatments with 150mg. through 2mm. of platinum. Abbe, Fleming and Klock also report successfully treated cases.

Operative cures for *glioma* are reported with percentages varying from 13-21. And no cures are reported for recurrence reoperated. It is therefore recommended to use radium soon after operation, applying 300mghrs. at a distance of 3cm. with 2mm. lead filter over the temple and in front of the eye. Purtscher, Duncan and Axenfeld have reported favorable results.

Glioma of the brain must be treated by imbedding radium directly in the growth after the tumor has been exposed at operation. How much good can be hoped for from such treatment is still a question. Williamson, Brown and Butler have shown experimentally that 900mghrs. will destroy brain cells within a radius of 5mm. This will serve as a guide to the treatment of brain tumors which cannot be removed, because by imbedding the radium and by knowing the size of the tumor, the dose can be regulated so as not to destroy surrounding brain cells.*

Carcinoma of the jaw is sometimes very favorably treated with radium. Here as with cancer of the tongue the case is sent for radium treatment late or after recurrences following operation. Involvement of the floor of the mouth or the antrum makes the prognosis poorer. In the latter condition the bone must be removed so that a large approach to the tumor is afforded. Then heavy doses of radium are necessary. Many times these tumors recede for a while only, and then become resistant to radium.

Carcinoma of the tongue may be treated by the combination of radium and surgery. It appears that those lesions situated on the anterior half of the tongue are susceptible to the rays, and those on the posterior half offer a bad prognosis. All these tumors of the mouth should be treated by imbedding the radium needles in the edges of the growths.

Carcinoma of the lower lip, especially the early lesion will respond to radium therapy as will the glands of the neck. This saves a mutilating operation. The author had a large papillary type become a depressed scar in eight weeks with the disappearance of the glands. However, there may be cases where the lesion on the lip

*Four cases of inoperable glioma of the brain have recently been relieved by 20gmhrs. of radium treatment from a pack with the skull closed.

can be healed, but the glands cannot. In such instances it may be well to extirpate the glands and leave the radium in the wound a sufficient length of time and close it at a secondary operation within twenty-four hours.

GROUP III.

In Group III. *leukemia* heads the list. The reduction in the size of the spleen and the number of lymphocytes is readily and remarkably accomplished by large doses of radium in packs over the spleen tumor and long bones. But up to date a cure has not been accomplished, though many years have undoubtedly been added to the lives of some patients.

Keratitis and corneal ulcers with and without hypopyon is another condition in which more experience with radium is needed. The dose used has varied from 60-100 mghrs. with filters of .25, 0.5mm. silver at 1cm. distance.

Aikins reports many good results in treating *toxic goiters*. In some he succeeded in reducing the size of the goiter somewhat, but at the beginning, the symptoms were relieved. How permanent this relief will be is not yet known. But the treatment may certainly be chosen in selected cases, such as bad risks either preliminary to operation or without operation, although of course one would be increasing the burden of radium by giving it the most difficult work. It seems that considering the good results obtained, it may be well worth while to use radium in cases that are not so far advanced. The dose used has been from 200-350mghrs. at 2cm. in squares over the goiter.

Molyneux and Field have had unusual success with *tuberculous glands*. The latter puts them in Group I. Radium has a definite advantage over X-ray in treating sinuses and glands in children, namely, that the radium may be strapped over the disease area even though the child is restless, and X-ray treatment is difficult with a restless patient.

It is difficult to put *carcinoma of the larynx* in its proper group. Because of the operative mortality both this and carcinoma of the esophagus may belong in Group I. When the growth has reached the vocal cords it may be considered beyond the reach of radium. However while still in the pyriform fossa, it can be reached readily through the Jackson laryngoscope and the needles of the element injected directly and left in from six to eight hours. The author is still treating such a case, now in the fourth month. The ulcer is only slightly smaller, but considering that had radium not been used the growth by this time would undoubtedly have progressed down the larynx, the result is encouraging. Packs are used on the outside as well, though they probably do very little good. It is advisable to perform a tracheotomy first on these cases as well as on polyps of the larynx and prepare to treat them for one year. The case mentioned has not yet had a tracheotomy done.

Carcinoma of the esophagus may be treated a

little less reluctantly. These too should be treated early and treated by radium because surgery either cannot reach them or has too high a mortality. The radium should be introduced through the esophagoscope or by a thread swallowed and drawn through a gastrotomy opening. No other way should be tried because other ways will not afford an accurate placing of the radium and are fraught with too many dangers. A dose of 200-300mghrs. is all that should be given at any one time so as to avoid perforations of and injury to the normal mucosa. Furthermore, a severe burn may result in a stricture which will be as bad as the disease. Results may be expected in two to four months, and it is needless to say the case must be watched over a long period of time.

Leucoplakia is a disease well known as a precursor of cancer. It is also a lesion which resists treatment. Radium has paved the way for relief and possible cure in lesions of the mouth and of the vulva. The author treated a case of leukoplakia of the vulva for six weeks, and succeeded in healing it. The accompanying pruritus stopped after the first exposure to radium.

RADIUM IN INOPERABLE CONDITIONS AND SKIN DISEASES.

In *inoperable carcinoma*, such as growths in the rectum, cervix, vagina and breast with foul discharging and bleeding ulcers, all that can be hoped for is the diminishing or stopping of the discharge and bleeding. This can generally be done by surface application of radium in capsules arranged over the growth. Caution is necessary to avoid vesico-vaginal and recto-vaginal fistulae in cancer of the cervix and vagina. Very often the floor of the cater-like ulcer is very thin and the radium destroys it. Such cases should not be treated. The danger of hemorrhage from destruction of carotids in treating similar growths of the tonsils and pharynx must also be born in mind. And often it is desirable to ligate them first.

The *skin diseases* which are amenable to radium often may be treated as well by other means. Psoriasis may be made to disappear with one treatment of radium but as when other remedies are used, it will probably return. Other skin lesions which respond to radium therapy are pruritus, lichenification, chronic eczema, xeroderma pigmentosum, xanthoma and lupus erythematosus.

Therefore under certain conditions radium should be used in preference to any other remedy. Sometimes the patient may be given the option of radium or surgery, sometimes both radium and surgery are to be used together; and finally, radium may be used as a palliative measure. It must be remembered that as Finzi says, "inoperable" no longer is synonymous with "incurable."

*Case seen since this article was written showed no evidence of the tumor. It is healed, though he has lost half of his epiglottis.

Evaluating the Utility of Local Anesthesia in Major Surgery*

Joseph L. DeCourcy, M.D., Cincinnati

Editor's Note.—It is interesting to note that while such a noted authority as Dr. Cushing found local anesthesia advisable for skull and brain surgery during the stress of war, since returning to private practice, he has resumed the use of general anesthesia in these trying surgical procedures. It is not surprising then that Dr. DeCourcy, after a thorough trial of local anesthesia in general surgery, should find it applicable only to certain operative procedures. As with all other methods of anesthesia local anesthesia has its indications and contra-indications its possibilities and its limitations. It is especially valuable in thyroidectomies and herniotomies. For other major operations it does not always obtund all painful and other disagreeable sensations and it makes demands on the surgeon's time, patience and technique that all operators are not willing to allow and only certain patients have the desire or fortitude to remain awake while their operation is in progress. It is interesting to note that Dr. DeCourcy has found weak dilutions of cocaine the most efficacious and reliable drug for local anesthesia.

SO much literature has come to our notice recently concerning the use of local anesthesia in major surgery, that I think it behooves us to try and analyze the various drugs and methods used in the abolition of pain sensation in a chosen region, and attempt to place them or limit them as the case may be, to their respective fields. Dr. R. E. Farr, in a recent article, advised that almost every abdominal operation be performed under local infiltration, while other surgeons restrict its use to a comparatively limited field of minor surgery or in exceptional cases where ether or its combinations are contra-indicated.

As in other things there must be the *happy medium* and it is this which I will attempt to find and I believe that when it is found it will serve a two-fold purpose (a) on the one hand, to the surgeon in overcoming the confusion which now exists in his mind as to which method to choose, (b) on the other, to the patient, eliminating painful procedures when local anesthesia is not advisable, or unnecessary etherization when general narcosis is not justifiable.

EVOLUTION OF ANESTHESIA

The important steps which made possible local anesthesia as it is employed at the present time, were the introduction of cocaine by Koller in 1884; the introduction of infiltrating the tissues with weak anesthetic solutions by Schleich, and the discovery that infiltration of cocaine into or around a nerve trunk in any part of its course effectively blocked the area supplies by that nerve. With these three discoveries it was thought possible that local anesthetics would soon entirely supplant the general anesthetics in their application to major surgery.

But we had overlooked other features; insensibility to pain was not the only requisite to be desired, we must also obtain sufficient muscular relaxation to insure the proper performances of the procedures contemplated, and not alone this, but it was soon discovered that not every operator possessed the necessary experience and skill

in the use of local anesthetics. In other words, men who had become accustomed to working on the anesthetized patient, could not readily adapt themselves to the delicate technique and the patience required in the successful performance of surgery under local.

The difficulties encountered have lead many surgeons to discard local anesthesia almost entirely and continue with the use of general narcosis in almost every case. With the coming of younger surgeons, however, especially trained in its use, local anesthesia has been given a renewed impetus. Indeed it is safe to say that fully fifty per cent. of all operations performed at the present time under general narcosis could be satisfactorily performed under local anesthesia intelligently used. Whether or not this is to be desired, I will try to show presently.

METHODS AND DRUGS EMPLOYED FOR LOCAL ANESTHESIA

At the present time two methods of producing local anesthesia are generally used. (1) Agents which freeze the tissue and (2) chemical analgesics such as cocaine and its substitutes.

We will not consider the first, of which ethyl chloride is a type. Of the second, cocaine, novocaine, procaine, apothesine and quinine and urea are those most commonly used. Of these cocaine holds the most important place and has stood the test of time. True it is that if used in the same dilutions as novocaine, procaine and apothesine, it will be more toxic, but when we consider that such weak dilutions of cocaine as 1-500 and even 1-1000 (Bodine) will give the satisfaction which can only be obtained by a 2 per cent. novocaine or procaine solution, then its toxicity becomes immaterial.

The repeated comparing of the toxicity of novocaine or apothesine with that of cocaine would lead the physician to believe that they had the same anesthetic potency as cocaine in solution of equal strength. *We have used nothing but cocaine during the past five years and have yet to see a case of poisoning or even idiosyncrasy.* It is true an idiosyncrasy may exist, but this would apply equally to novocaine, procaine and apothesine. Before the war we were using novo-

*Read before the Ohio County Medical Society, Wheeling, West Virginia, April 2, 1920, and the General Practitioners Medical Society, Columbus, Ohio, April 22, 1920.

caine exclusively, but since then we have found that novocaine and the other synthetic drugs are not dependable. This, however, is only our opinion.

The toxicity of apothesine has been rated to be twice that of procaine by the Council of Pharmacy and Chemistry of the A. M. A.

The combination of quinine and urea was introduced into surgery in 1907. It has several advantages, being without toxic effects as far as is known and produces an anesthesia which lasts from 24 hours to four or five days. At the present time the drug is employed in 0.5 to 0.25 per cent solutions. In stronger solutions it has been known to interfere with wound healing.

To sum up, therefore, the clinical dangers cannot be predicted by the use of any one drug, since clinical accidents depend upon idiosyncrasies, or the technique of application.

Cocaine 0.2 per cent in the skin and to block the nerves, and 0.1 per cent for infiltration, as recommended by the late J. A. Bodine, is still our choice.

SUITABLE CASES FOR LOCAL ANESTHESIA

To what extent can local anesthesia be successfully and satisfactorily employed? Many authors and surgeons differ as to extent to which local anesthesia can be applied and therefore we will try and give you an option from our own experience.

For the minor procedures such as exploratory punctures, amputating toes or fingers, circumcisions, removal of benign growths such as wens, cysts, lipomata, benign tumors of the breast, or isolated superficial glands, we use local anesthesia entirely with two exceptions—we never use local anesthesia in inflammatory tissues or cancerous tissues, because we cannot only not induce satisfactory anesthesia in inflamed tissues, but we are also liable to disseminate the infection or cancer to other parts.

For the large majority of major work we have become rather skeptical after giving it a thorough trial.

During the past four years I have personally performed over one thousand major procedures under local infiltration, including thyroidectomies, herniotomies (inguinal and femoral), appendectomies (interval and acute), suprapubic cystotomies, rib resections, amputations (Biers' method), cholecystostomies, supra-vaginal hysterectomies and abdominal explorations. During this period, I tried to preserve an open mind toward anesthesia in order not to prejudice myself with either, and if anything I think I rather leaned towards local work because I was anxious to see to what extent it could be used.

The result has been that I now limit local anesthesia as a routine measure to two major procedures, namely, thyroidectomies and inguinal herniotomies. Local anesthesia is ideal in these two procedures, because of the superficial loca-

tion of the structures involved and the definite position of the sensory nerve trunks supplying the field of operation. And they have been uniformly successful in my hands. By successful, I mean that they can be performed thoroughly and painlessly under local infiltration.

From this you would infer that the other operations were not successful. This was not entirely true. Many of these patients did not complain of any pain, although some did. In others we did not get good relaxation; we could not maintain good exposure because of resistance on the part of the patient; this was especially true in operations upon the upper abdomen and existed from the very beginning of the procedure; whenever a walling off pad had to be used there was always the sickening sensation of pulling on the intestines; the interval appendectomies were painless but the readjustment of the bands and membranes, when encountered was not satisfactory. Inflammatory cases were never satisfactory for reasons already stated.

For strangulated hernia of any variety, local anesthesia should always be the method of choice. The added strain of general anesthesia upon these patients, already toxic, is frequently more than they can withstand, and there is no need for haste as an abundance of time can be taken to restore the gut of doubtful vitality.

For the majority of abdominal operations, therefore, I would say that local anesthesia is not satisfactory, not that there is any difficulty of entering the abdominal cavity, as this can be very readily done, but because of the various complications that may be present. We know that the abdominal organs are insensible to pain, but the parietal peritoneum is most sensitive, especially when inflamed and as was shown, any breaking of adhesions or dragging upon the mesentery is likewise painful. Furthermore, complete relaxation is necessary in abdominal surgery to secure the necessary wide exposure, and this cannot always be obtained under local anesthesia.

Operations about the scrotum, as for varicocele or hydrocele are all amenable to local anesthesia as are also many operations about the rectum, such as fissure or thrombotic hemorrhoids, however, when thorough stretching of the sphincter and is essential then general narcosis is preferable.

In addition local anesthesia is contra-indicated in children or those greatly excited or hysterical.

ADVANTAGES AND DISADVANTAGES OF LOCAL ANESTHESIA.

Local anesthesia unquestionably has many advantages over general narcosis especially in thyroidectomies and herniotomies. In the former the post-operative blood changes and the kidney, heart and lung complications are all avoided. Likewise in goiter the danger of secondary hemorrhage from vomiting is greatly lessened

and the patient may be allowed to drink immediately after or even during the operation, thereby allowing a free flushing of the excretory system.

In hernia also there is a distinct advantage in having the patient conscious, that he may demonstrate the protusion by coughing. There is also less danger of the forcing or breaking of sutures and tearing of tissues from post-operative vomiting, thereby favoring a recurrence of the rupture.

I cannot see where local anesthesia has any advantages over general anesthesia in the remainder of major surgery with the possible exception of poor risks. I do not believe that it lessens post-operative pneumonia, which, in my experience, occurs in drainage cases where for some reason or other drainage has become impaired and is of embolic origin. That it lessens mortality is not appreciable. In my opinion the advantages of general anesthesia overbalance the advantages of local anesthesia in major surgery with the exception of the two procedures mentioned.

THE PREPARATION OF THE PATIENT

The preparation of these patients is important from a psychic viewpoint as well as a physical one and the success or failure of the operation frequently depends upon the preparation up to the time of operation. Nerve calm can usually be assured by prevention of apprehension on the part of the patient and can be brought about by a good night's sleep before the operation and by reassurance from the nurse in charge. Morphine grain 1/4 is given one-half hour before the operation, unless otherwise contra-indicated. This serves to allay the nervousness on the part of the patient and is also the physiological antidote of cocaine.

In goiter cases where we have an exaggerated type of nervousness we usually precede the operation with morphine grain 1/6 and hyoscin grain 1/200. In doing over one hundred consecutive thyroidectomies by this method we have never had to resort to general anesthesia.

THE CONDUCT OF THE OPERATION

There are three things which are quite essential to the successful conduction of an operation under local anesthesia.

First, an intelligent appreciation of its limitations; *second*, the experience and the skill of the operator; *third*, the knowledge of the sensory nerve supply to the given region. An attempt to operate any or every case under local anesthesia is but to court failure. A nervous, fidgety operator will never find encouragement in local anesthesia. Cocaine surgery requires a patience and a technique entirely foreign to that of general anesthesia surgery.

The patient should be made as comfortable as possible upon the operating table. The operat-

ing room should be kept as quiet as possible, especially does this apply to the handling of the instruments. Clean cut dissection should be the rule. Rough manipulations, pulling or tearing of tissues is never permissible. Not infrequently, carelessness to observe the slightest details early in the operation causes restlessness and apprehension on the part of the patient, or even to complete demoralization and even cause the operation to be discontinued until a general anesthetic is given.

Failure with local anesthetics and condemnation of the method oftentimes results from neglect in observing these small and apparently trivial details.

SUMMARY

To summarize, therefore,

(1) Cocaine Hol in weak dilutions is still the most efficacious and most reliable drug to use in local anesthesia.

(2) I would recommend local anesthesia in all thyroidectomies and inguinal herniotomies, aside from minor procedures, because in these two procedures local anesthesia has distinct advantages. It is true that with intelligent and skillful use of local anesthesia by one skilled in its technique, a great many more major operations can be successfully executed. Furthermore it must not be forgotten that local anesthesia in a major operation can be used up to the painful part and then nitrous oxide or a small quantity of ether may be given to tide the patient over the painful procedure, a method now known as combined anesthesia, or anocithesia.

(3) Local infiltration is never permissible in infections or cancerous tissues because of the dangers of disseminating the infection or cancerous lesion.

(4) Local anesthesia requires a precision of detail and a tax upon the surgeon entirely foreign to that of general narcosis and caused Matas to observe, "It is this tax upon the operator's attention and the vigilance required to keep the inhibitory powers of the patient under control, and the time consumed in the anesthetizing procedure that will prevent cocaine and the local analgesics from gaining ascendancy in the crowded amphitheatres of popular teachers where quick and brilliant work is expected by an impatient audience."

1. *Abdominal Surgery Under Local Anesthesia*, Jr. A. M. A. Vol. 73, page 391, August 9, 1919.

The American Proctologic Society's twenty-second annual meeting will convene in Boston, June 3, 4 and 6. Dr. Alois B. Graham, Indianapolis, is president, and Dr. Ralph W. Jackson, Fall River, Massachusetts, secretary-treasurer of the society.

An Improved and Simplified Technique for Enucleating Tonsils with Especial Reference to Soft and Submerged Tonsils and New Instruments Used*

A. H. Herr, M.D., Cleveland

Editor's Note.—Until some genius in the profession devises some therapy for obviating the results of tonsil infections, the removal of offending tonsils promises to be a subject of perennial interest. In this connection Dr. Herr offers a personal technique for tonsil enucleation devised after a study of the methods of the best American operators with the use of some improved instruments. In presenting his subject Dr. Herr dwells on certain phases not usually touched upon, such as securing the patient's co-operation before and after the operation and a consideration of the economic problems involved. The later considerations offer much food for thought.

IN preventing and curing the general diseases that may result from infection in the tonsils, it seems to me that the only sensible thing to do is to take the middle path between ultra-radicalism and ultra-conservatism. We should never remove a tonsil, especially in children under 7 years, unless we feel that it is an actual menace to the patient who carries it; and can not be brought back to normal by treatment. At the same time, we should never allow a patient to retain a tonsil when we know that it is dangerous for him to do so. Every patient's throat should be inspected at your first examination. About three months ago I had a patient who had been sent to California for his health by his family physician. His California physician told him that all he needed was a tonsillectomy. He came back and I removed his tonsils. His general health has improved wonderfully. All I can say has not induced him to return to his former physician, but he has gone to a new physician because he complained that his family physician for 20 years had never looked into his throat and he feels that he was neglected.

INDICATIONS FOR TONSIL REMOVAL.

Tonsils should be removed in all cases of:

(1) Obstructive breathing, due to tonsil hypertrophy, especially in mentally retarded children.

(2) History of previous attacks of tonsillitis.

(3) Bacteriologically diseased tonsils, also, peri-tonsillar abscess. I would emphasize that it has not seemed to me necessary or right, to remove a tonsil unless it is positively infected.

(4) History of rheumatism, nephritis, chorea, arthritis, affections of the liver, gall-bladder, skin, nervous system, stomach and heart in connection with even a slight tonsil history.

If you have patients who are not improving as they should, examine their tonsils and if there is the slightest infection remove the tonsils and see them get well. The dangerous tonsil, as a carrier of disease, is the smaller tonsil which seldom causes pain and which the patient thinks

is healthy. This is the type of infected tonsil which is so often overlooked by the physician who does not yet realize what a serious matter it is to overlook an infected tonsil, especially in adults and during middle age. Most people regard good health too lightly. We should be more serious in regard to our health and in preventing disease. In the army it is a disgrace to get sick. It should be so in civil life. It is a sin to get sick and even civilized Christian people do not seem to realize that it is their duty to take good care of their bodies.

Parents who have infected tonsils should have them removed before they have infected their children. I do not wish to convey the idea that my subject is a new one. For many years the necessity of removing diseased tonsils has been recognized. I remember when a boy at home my oldest sister was an invalid suffering from tuberculosis and it had been said was given up to die by all the doctors who saw her. Her tonsils were badly infected. They were removed. How well I remember the excitement and horror of the hemorrhage. This was in the early autumn and of course one so seriously affected did not improve rapidly and later in the winter, there was a great awakening among our folks over Divine Healing and she was healed. The doctor who removed her tonsils, thus shutting the gate through which infection was continually gaining entrance into her blood stream, has never received any credit and she has given 33 years of her life to the Lord in the Mission Field, is well as any woman and is today a missionary in India. I honestly believe she would have died in spite of Divine Healing had her tonsils been left in. Her tonsils were clipped and then cauterized with a hot iron.

Many operations have been devised since. Some devised to remove only a part of the tonsils as their originators advocated that a part of the tonsil should be left, while others argued that it should all be removed. We now know that the tonsil should be removed in its entirety within its capsule.

Dr. J. F. Baldwin, April, 1920, *Ohio State Medical Journal*, says: "In removing the appendix remove all, if you leave a little bit of the

*Read before the Hardin County Medical Society, January 6, 1921.

appendix, you are very apt to have symptoms of appendicitis and indigestion. And so it with the tonsil, it should all be removed within its capsule. In days gone by some doctors, (I think they are all dead now), argued that every thing in the body was put there for a purpose and should not be removed and that if due to disease it becomes necessary to remove the appendix or tonsil they should not be removed entirely but clipped and parts of them left. But now all agree that the appendix should all be removed and the operation which removes the entire tonsil within its capsule is the operation of choice.

I am sorry to say the removal of tonsils is today the most abused operation of all surgery. To perpetuate the favorable public opinion of our profession this condition must be improved. The patient is entitled to a good operation. It should be as earnestly done as the treatment of a broken arm. As people are enlightened they are demanding better service at our hands and since it has become generally known that infected tonsils are the cause of so many ailments the applicants for tonsillectomy are becoming more and more numerous and you will be asked more and more frequently to perform this difficult and annoying operation, so that it behooves us as a profession to be as proficient as possible and we feel that this method should on account of its many advantages be more generally used. No surgeon should undertake the removal of the tonsils unless he understands the anatomy of the tonsil and the surrounding structures, and especially, the blood supply, for 1/4 of an inch may mean the life of his patient.

VARIOUS TECHNIQUES.

In 1902, in clinics at college, I was taught to clip tonsils with Dr. Matheiu's tonsillitome which was nearly always a bloody operation, and it was necessary in most cases to remove the tonsils again within the next few years. Later, in post-graduate work in Chicago, I was taught to remove them by sharp dissection and snare with about half as much primary hemorrhage, and 20 per cent. of secondary hemorrhage, which was very annoying and even frightening, but it was the best we knew at that time and with the knowledge gained while attending clinics in New York I had very little better success.

It has been my good fortune during the past few years to become acquainted by personal observation with the methods introduced by Dr. Greenfield Sluder, of St. Louis, Dr. Crowe of Johns Hopkins University, Dr. Lynch of New Orleans, Dr. Beck of Chicago, Dr. Sanger of Baltimore, Md., and Dr. Mathews of the Mayo Clinic, for the removal of tonsils and as a result I can look back on a most satisfactory experience with this annoying operation.

As the years passed my percent of recur-

rences and hemorrhage decreased as I employed the different methods mentioned above and also the Sluder-Beck Technique, the scissors-dissection as is now done by Dr. Lillie, the La Force Technique, and the Beck-Schenck Technique. After some practice with all the methods of removing tonsils I finally settled on the dull dissection and in a series of a large number of cases I noticed that practically all of my hemorrhage was on the right side and after days of study, observation and investigation, decided that the curve in the Robertson instrument which I was then using was too acute and too long, so that it caught the anterior branch of the descending palatine artery, thus causing the hemorrhage. So I had an instrument made after my own design and after repeated improvements Kny-Scheerer finally finished the instrument I am now using, and I have had absolutely no hemorrhage in the last 800 cases.

PERSONAL OPERATIVE TECHNIQUE.

By applying some of the principles of some of the techniques mentioned above, by discarding the poor and improving on the good and by special attention to the anatomy of the throat and blood supply of the tonsils and by designing instruments and by various improvements in instruments I have perfected the method of removing tonsils which I am now using, the technique, of which, is as follows:

After instructing the patient on his behavior and the part he plays in the operation and with assurance on the part of the operator for the purpose of reducing all excitement and apprehension to a minimum, about eight drams of a one-tenth of one per cent. novocaine solution, to which has been added one minim of adrenalin to each dram, is carefully flooded into the fascial space between the capsule of the tonsil and the surrounding tissue with a Mathews syringe. (Contrary to the teachings of Phillips of New York and others, it is not necessary to inject the tonsil itself.) Then with the Chamberlaine tongue depressor the tongue is depressed until the fibers of the palato-glossus muscle are on such a tension that the anterior pillar is well defined; in the triangle thus formed with the lower pole of the tonsil and the tongue is the point at which the fascial plane between the capsule and the muscle is most easily found. The blunt point of the dissector which I have devised, (or the Robertson instrument on the left side if the operator is right handed), is inserted here and carried upward between the muscle fibers and the capsule, (neatly separating them yet cutting nothing), up and over the superior pole after which it is carried downward between the capsule of the tonsil and the fibers of the palato-pharyngeal muscle. To prevent bleeding and to perform the operation smoothly the dissector is always external to the capsule but in close apposition with it. The upper pole of the

tonsil including the capsule is now grasped with the grasping forceps which I have devised and the superior constrictor muscle with its fascia and the venous plexus of the pharynx is pushed away from the tonsil in such a manner that the glosso-pharyngeal nerve does not sustain injury.

Since a portion of tonsillar tissue or plica large enough to enclose a single crypt may harbor infection capable of scattering virus through the entire system, the operator should always notice if, there are any infected crypts in the plica tonsillaris and if such is the case Brown's snare is slipped over the handle of the forceps and over the tonsil carrying it well down beyond the plica so that when the snare is closed the plica is removed with the tonsil. The various operations have their advantages and disadvantages. All will remove the tonsil in its entirety sometimes. But this operation always removes the tonsil in its entirety within its capsule.

ADVANTAGES OF THIS METHOD OF REMOVING TONSILS.

It can be used with both local and general anesthesia. There is a great deal less hemorrhage. It makes possible bloodless removal of tonsils. There is less damage to the surrounding structures, and this operation leaves the throat in much better condition. Also it requires the minimum number of instruments and instruments of the simplest construction. Again the tonsil is never torn no matter how friable or rotten it may be. Finally a tonsil enucleated by this method never returns.

It is simple and easy to perform, requiring no assistants, not even a nurse being necessary. The patient can eat as usual and is able to take care of himself and is required to lose the least amount of time from work. The fewer the meals the patient misses the better is the progress of the case. The patient need lose no time whatever from work, if the work requires no singing, speaking, or strenuous muscular exercise. If the patient has no light work he can read, play checkers or anything which requires no talking or muscular exertion. The throat pains less if the mind is occupied with something that is interesting. Experience with thousands of cases had demonstrated that the results are better if the patient is not allowed to go to bed and pity himself and attract a lot of attention and sympathy.

SUPERIORITY OF LOCAL ANESTHESIA.

Before 1915 all my work was under a general anesthetic. No matter what the desire of the patient, I refused to operate unless the patient was asleep. But now because of the many advantages, nine hundred and ninety-nine out of a thousand of our tonsillectomies are done under local anesthesia. Some way it is brutal to oper-

ate with the patient awake, but to my mind it is more brutal to forcibly hold the patient on the table while he is being poisoned into unconsciousness with a general anesthetic, than to have him sit up with a smile on his face for two to five minutes while the operation is being performed without shock, pain or hemorrhage. The leaders in throat surgery are using local anesthesia and the fact is as men are enlightened they are adopting this method. Those of our profession, who are not already using or advocating the use of local anesthesia, I would refer to the report on this subject in the July 31, 1920, number of the *Journal of the American Medical Association* by the committee of the Eye, Ear, Nose and Throat Section.

This committee, after one year of activity and investigation among the leading nose and throat specialists of the country, made a report at our annual meeting at New Orleans in which it said: "Your committee finds that local anesthesia is the method of choice by practically all American rhinologists. There is less hemorrhage, far greater safety especially when operating near the cribiform plate, and the danger of toxicity will compare favorably in the use of the local anesthetic in preference to any general anesthetic. Even the nitrous oxid and oxygen combination looked on by many as absolutely safe, has a record of deaths that destroys that assuredness. One observer has reported thirty-seven deaths from this *safest* general anesthetic." The conclusions of this committee were that "local anesthesia is the ideal method of operating for affections of the nose and throat. None of the dangers that have been mentioned are any greater than those following general anesthesia."

By local anesthesia I do not mean a bohted-up, half-way anesthetic but a real local anesthetic. The patient is entitled to a good anesthetic, be it local or general. In using a general anesthetic for removing tonsils the patient should be thoroughly anesthetized, then the mask should be removed, an assistant should steady the head and the operator should remove both tonsils. If the patient wakes up too soon the operator should stop until surgical anesthesia is again accomplished when the operation should be completed. If an anesthetist fails in his duty to surgically anesthetize my patient I refuse to allow him to assist me in the future. I am frank to admit I am afraid of a general anesthetic in nose and throat work, as we never know which patient may die, from the anesthetic. Another advantage to local anesthesia is I do it myself and if it is not properly done I can blame no one but myself.

Dr. Fielding O. Lewis, in *The Therapeutic Gazette*, May 15, 1919, advocated this method over general anesthesia, "Because it will not start up an old tubercular lesion of the lungs, will not produce nephritis, cardiac or respiratory failure or insufflation pneumonia. It will not

cause abscess of the lung and is advisable when general anesthesia is contra-indicated. It is a time saver, requiring no assistants.

"The operation can be done in less time without the shock caused by ether. The operator must have a strong personality to use local anesthesia successfully. This is why some doctors fail. It requires tact and the *knack*. There is a knack to every highly developed artistic or scientific achievement. Dr. Ersner of Philadelphia has even performed a series of operations under local anesthesia, using only a normal salt solution."

ADVANTAGES OF THE NEW TONSIL GRASPING FORCEPS.

They are simple. They do not tear the tonsil nor slip off as they grasp the entire tonsil within its capsule. They can be used with any kind of a tonsil, but are especially devised for grasping soft and friable tonsils. They have a wide holding surface and the fenestration in the blades which grasp the tonsil is a distinct advantage in that it increases the holding ability. They hold the tonsil tenderly and yet do not slip off. They have the torque and ease of operation which are so essential, as they are operated with the tips of the fingers and the easier they are to operate the better. They do not tear the capsule of a friable tonsil. They are constructed of good steel, as two of the main features of the grasping forceps are torque and resiliency. Also they must not be so stiff that when they are closed the tonsil is clipped off. The mouse teeth are short and blunt and the blades have a sufficient resiliency so that the tonsil is not crushed when the forceps are closed, because the torque of the blades allows them to bend and the slight obstruction offered by the engaged tonsil is sufficient to keep the end of the grasping blades apart, even though the clasp on the handle is engaged.

ADVANTAGES OF THE NEW TONSIL DISSECTOR

It is simple. The point is blunt and the edges are dull so that it will not cut but separates the tissue fibers. It is easy to clean, keep clean and to sterilize. It does not cut but separates the tonsil from the surrounding structures, following the external surface of the tonsil so closely that the anterior branch of the descending palatine artery is not separated. This is the distinct advantage of the instrument as it makes it possible to enucleate tonsils with the technique described with practically no hemorrhage.

SECURING THE PATIENT'S COOPERATION.

Experience with thousands of cases has taught us that the more we take the patient into our confidence the more is his fear dispelled and the easier and smoother is the progress of the operation. Therefore we have arranged a few directions and have them printed on a sheet of paper

which is handed to each patient before he is operated. These directions read as follows:

To have tonsils removed:—

The operation can be made easier by co-operating with the surgeon and doing as he says. If he is going to hurt you he will tell you so. Do not get your nerves on a tension by fear for it makes the operation more difficult and after it is done you will say that it is not as severe as you had anticipated and that you would not have been one bit fearful had you known it was no worse. Do not hold your breath, but breathe through your mouth and be relaxed and have confidence in him that he will take care of you.

A short time after the operation the effects of the medicine which is used to anesthetize the throat begins to fade away and the pain appears but only continues from ten minutes to one hour. (Some cases have no pain afterwards, in fact, about one-half of my patients suffer no pain after I have peeled out their tonsils.) If pain is severe apply cloths wrung out of ice-water to outside of throat. This will also answer to arrest hemorrhage if any should occur. But do not be frightened at a little bloody sputum, if you notice a cupful of blood (not bloody sputum) then you may call it bleeding, and not just an oozing of a little blood. Breathe through your mouth and strive at repose and tranquility. When you go to bed lie so that you need not rise up and spit but recline in such a manner that the saliva simply runs out of your mouth into a towel placed on the bed under the mouth. If told that you have other throat trouble that should be treated you should return at 2 p.m. the next day for the treatment. If there is any pain after the first 24 hours use hot cloths.

Eat ice cream, cold watermelon, cold gelatine, eggs raw or soft boiled, noodles, oysters, and cold milk. Play checkers or read something light. If you should care to lie down, do not lie on a sofa but go to bed and stay there until the next morning, when a short stroll out of doors is refreshing. Do not go to bed and pity yourself, but just remember that hundreds and thousands have gone through the same experience and I have never had a death or even a serious condition. Experience with thousands of cases has shown that those who proceed the normal course of life after the operation do better than those who go to bed and pity themselves. Do not gargle until the next day after the operation then you can gargle, talk and eat anything you wish. The fewer the meals that are missed the better is the progress of the case.

Do not forget that the removal of tonsils is not a curative measure but a preventative measure. It simply removes the breeding place of the germs and shuts the gate through which they enter the blood stream so that no more damage is done. And I leave it to your family physician to treat the systemic troubles and organic lesions.

which have already been caused by the germs which entered your system before your tonsils were removed.

ECONOMIC CONSIDERATIONS.

The benefit of this operation is usually underestimated hence the fee is too low. All oculists know that the removal of an eyeball is much easier than the proper enucleation of a tonsil. Yet the public is more willing to pay \$100.00 for having an eyeball enucleated than having a tonsil enucleated.

I do not know why the pharynx has been so long neglected by the medical profession unless it is because the mouth is the filthiest part of the entire human anatomy or because all fees for throat work are ridiculously low. For example, I removed a young lady's tonsils for \$35.00 with the feeling that to charge her more would be a hardship on her, but soon after she paid a hundred and fifty dollars for a coat. So it takes care lest we underestimate the value of a tonsil operation. When we consider that in removing the tonsils of a wealthy man we save him from possible death due to Bright's disease, heart disease, cancer of the throat or stomach, brain disease, or disorder of the blood, a fee of \$1,000 to \$5,000 seems small. Wealthy men have been known to pay \$1,000 to \$25,000 for an operation which has been of less benefit than a tonsillectomy and which requires less skill to perform. I have never yet received a fee of more than \$1,000 for a tonsillectomy, but find those who can afford it very willing to pay \$500.00. We aim to get a line on people and when a young man spends everything on luxuries, nick-nacks, and a hundred dollars at the World's Series he is able to pay \$100.00 for the operation, whereas if he is a student, teacher, ex-service man or the head of a large family and not well to do he is operated for half price.

While, as members of our profession, we are supposed to work for the good of humanity and never allow a monetary thought to enter our heads, and while we do thousands of dollars' worth of charity work, the fact remains, we must get some money from some source and the matter of the fee for our service must be given consideration.

In my office the price for the first examination and treatment ranges from \$5.00 or \$10.00 to \$25.00. Subsequent treatment \$2.00 and up. Operation: \$100.00 and up, depending on the financial condition of the patient and the trouble the patient causes me and the office. It is the intention always to make a reasonable charge, taking into consideration the difficulties encountered in the case and the financial condition of the patient. Laboring people usually pay \$75.00, \$100.00 and \$150.00, or one-tenth of the yearly income, while the well-to-do can afford to pay more. But the poor receive attention regardless of price ranging from \$75.00 to \$65.00

to \$50.00 and the semi-charity pay \$35.00 to \$45.00. Whatever price is arranged with the patient includes the treatment of the throat until the fauces are healed.

Special days are set apart for charity cases when the operation is done for clinical purposes without charge. Bidding against other doctors is never indulged in with the well-to-do patient. It is not the intention to hold the price so high the poor can not meet them, necessitating their going to some cheap operator and receiving a poor operation. The poor and unfortunate are never turned away on account of their lack of money.

For much of the information I have been able to bring together I am indebted to Drs. Rosenow, Lillie, Mayo, Large, Chamberlain Lynch, Barnhill, Sluder, Mayer, Chase, Mathews, Mosher, Crowe, Forbes, Gleason, Kerley, Barker, Clark, Skillern, and Sonnenschein.

WESTWOOD AND DETROIT AVE.

PROPAGANDA FOR REFORM.

Bouchard Pills (Martin Rudy), consisting essentially of iron sulphate and resins, with a small amount of oil of cubebs. Some injection tablets in the same package consisted essentially of zinc sulphate and potassium permanganate. *Perlas Urinales-Antisepticas* (G. J. Fajardo), containing methylene blue, cubebs and nutmeg, *Metilol* (Logan Pharmacal Co.), tablets consisting essentially of hexamethylenamin, nutmeg and cubebs. *Montauk Santal Comp.* (G. J. Farjado), capsules containing oils, including sandalwood oil (*Jour. A. M. A.*, March 12, 1921, p. 743).

Woods' Tobacco Habit Cure—On February 24, 1921, the Postmaster General issued a fraud order against Edward J. Woods, Inc., exploiters of drink and tobacco habit cures. Woods' cure for the tobacco habit was analyzed in the A. M. A. Chemical Laboratory some years ago and it was found that among the tablets that constituted the treatment there were some of asafetida and methylene blue. The purchaser was told that one of the signs of a cure was that of offensive-smelling perspiration and a strong odor from the bowel excrement, while the "greenish color" of the urine was "proof positive" that the tobacco poisons were being eliminated through the kidneys. The governments case dealt only with this alleged cure for the tobacco habit, but, as the fraud order has been issued against Edward J. Woods, Inc., it will have the effect of putting the Woods' "drink cure" out of business also. It was also brought out that the directions now being sent out with the treatment now contain no admonition to watch for favorable signs, but the ingredients which manufacture those signs were still retained in the treatment. (*Jour. A. M. A.*, March 19, 1921, p. 811.)

Erysipelas of the Head and Face Treated with Bacterial Vaccines

John H. Slevin, M.D., Detroit, Mich.

Editor's Note.—Erysipelas of the head and face is a dangerous condition and if not promptly and successfully combated may have a decided mortality rate. In the past all sorts of local applications and even injections have been tried to allay the inflammation and stop its spreading, but the very number of these local agents would indicate their more or less inefficiency. Hence it is of interest to note that Dr. Slevin has found bacterial vaccines of superior value in controlling and curing erysipelas of the head and face. On an average cases have responded to from 6 to 10 doses of vaccine given daily. Patients who had suffered previous attacks noted a more rapid recovery under vaccine therapy.

IT is my experience that there is no method of treatment for erysipelas, which has proved to be clinically curative, until the advent of vaccine therapy.

INEFFICIENCY OF LOCAL TREATMENT.

I have found no indications for internal medication in erysipelas, and Osler says there are none. In fact, all the text-books I have consulted damn with faint praise the internal treatment which each seems to find it necessary to suggest.

Under local treatment, Osler says: "Of local applications ichthyol is at present much used. The inflamed region may be covered with salicylates and starch. Perhaps as good an application as any is cold water which was highly recommended by Hippocrates." The most recent publication that I have seen, which is Moorhead's "Traumatic Surgery," says: "Local measures have been recommended almost without number and cures often ascribed to them with about as much basis as if they had been similarly used to hasten the desquamation of scarlet fever, measles or any other disease of self-limited type." This agrees exactly with my opinion.

Of local methods thought to act as cures I may mention the injection of antiseptics in front of the advancing margins.

I early learned that the streptococci advance irregularly ahead of the typical margin and in the few cases in which I saw it used the effect was ludicrous, the disease appearing beyond the injected area on schedule time. Sloughs due to the injection have been reported. One method that appealed to me theoretically and to which I gave a thorough trial was painting the involved area and a wide margin beyond with 85 per cent. phenol later neutralized with alcohol. The successes were in no greater proportion than by palliative treatment and I stopped it after getting a superficial necrosis on the tip of the ear in one case and almost at the same time having a doctor, who had repainted his mother's leg because my application had not checked the advance, report that she was voiding smoky urine containing casts and albumin. Once I saw a sort of lattice fence painted with 95 per cent. phenol around the indurated margin. The erysipelas jumped the fence, roamed awhile and disappeared, leaving the fence to be erased by painstaking and pain-giving dressing. I have not used it myself. A somewhat similar method was painting a stripe or boundary board with iodine or silver nitrate about the inflamed area. To my eye it made a jarring color scheme and evidently increased the patient's

subjective burning without affecting the course of the disease.

It seems to me that the most objectionable treatment and apparently the one most frequently employed, outside of hospitals, is besmearing the patient's inflamed area with grease containing some mixture of ichthyol. This causes neither subjective nor objective relief, is a dirty malodorous mess that firmly adheres to the tender skin and make a nasty scab during desquamation, especially where hairy surfaces are involved. Other ointments vary from the above chiefly in color. They are objectionable because difficult and painful to remove.

VALUE OF BACTERIAL VACCINE THERAPY.

In the last few months I have had a series of ten cases of erysipelas under my care treated with bacterial vaccines which I wish to report. Six women, all past 40 years; six men, all past 30 years. The men all had been intemperate, indulging in alcoholics and therefore were most unfavorable cases. The women all gave a history of previous attacks, lasting from one to five weeks. In no cases were more than ten doses of vaccine given at daily intervals until cure was effected and in seven of the ten cases cure was effected after the exhibition of the sixth daily dose of vaccine. In the cases where the patients had been afflicted previously, they all were charmed by the rapidity of recovery.

The most recent case, that of a lady, initials W. H., age 65, had suffered two previous attacks, one of eight weeks and the other of six weeks' duration. She was quite delirious when I was called. Eyes closed completely and face and head swollen out of all resemblance to herself. Temperature, 104°; pulse, 140; respiration, 26. Made complete recovery after the tenth dose of vaccine and after the fourth dose patient remarked how wonderfully quick, as compared with former experiences, her return to the borderland of health was and she added that this attack in its very incipency was the most severe and serious attack of all.

In conclusion I wish to emphasize the therapeutic importance of bacterial vaccines in the treatment of erysipelas. There can be no question or clinical doubt of the value of a remedy that answers the provisions of the two cardinal laws, in the practice of medicine, namely, "Do no harm" and return your patient to health "quickly, entirely and pleasantly."

553 DAVID WHITNEY BUILDING.

OHIO PUBLIC HEALTH NOTES

The United States Public Health Service has established a station for the care of sick or disabled former service men in Toledo. The new station is the eleventh of its kind to be established in Ohio and will provide 5,000 northwestern Ohio ex-service men with immediate access to government medical service and advice. Dr. Charles E. Fisher is executive head of the Toledo station and his staff includes Drs. F. B. McNierney, R. P. Daniells, L. R. Effler, P. G. Tait, F. W. Pilliod, J. T. Murphy, W. M. Shapiro and a dentist.

—"Swat the fly" is one of the battle cries which the state and local health departments urged upon the public in connection with the annual clean-up, fire prevention and public safety campaign waged throughout the state during the first two weeks in April.

—At the invitation of the Cincinnati Public Health Federation, the National Committee on Mental Hygiene, New York, has undertaken a mental hygiene survey of the City of Cincinnati and Hamilton County. The purpose of the study, which will require from six to eight months, is to find out what sort of a problem mental disease, epilepsy, mental defect and other abnormal mental conditions are in the community.

—More than 71,000 visits were made last year to Toledo homes where there was illness by the 32 nurses of the Toledo District Nurse Association, according to the annual report just issued. One-seventh of these visits were to the city's tubercular patients. Seven hundred new tuberculosis cases developed during the year.

—The "Come-Back Club" for men fifty and over was born in Dayton recently. The organization is working through the physical department of the Y. M. C. A., whose aid has been enlisted to prescribe exercises that will have a rejuvenating effect upon those who take them.

—The ban barring unvaccinated children from attendance in public, private or parochial schools of Columbus was lifted by the local health board late in March on announcement from Dr. W. L. Dick, city health officer, that the smallpox situation was clearing rapidly and that all vaccinations which could be obtained had been made in the schools. The ban was in effect for three weeks.

—The State Board of Administration and managing officers of the state institutions are urging the legislature to make an appropriation for the employment of dentists to care for the teeth of the state's wards. Most of the institutions have complete equipment of instruments, chairs, etc., but there are no funds with which to employ dentists to perform the work.

If an appropriation is secured it will be used either for the employment of dentists in connection with the regular staff of officers of the state institution, or the service of dentists located in towns where institutions are situated. In either case it is estimated that \$25,000 will be required to give the plan a fair trial during the coming year.

—A series of community or neighborhood health clinics at all Akron schools, primarily for the purpose of guarding the health of school children, but so operated as to make possible the holding of parental, baby or other clinics, was advocated recently by Rev. R. A. Dowd, former chairman of the Summit County Red Cross executive committee, following opening of a clinic at a local parochial school.

—Dr. Margaret Rupert of Columbus, a graduate of Ohio State University, has become deputy health commissioner of Cuyahoga County, assisting Dr. Robert Lockhart. Dr. Rupert will act as medical inspector of county schools and will direct the "watch your health" campaign which has been inaugurated. Three full-time nurses are also members of the school medical staff.

—Public indignation has been aroused in Salem as a result of the filing of a number of damage suits against the city for sickness and death during the typhoid epidemic. Recognizing that verdicts in these cases would bankrupt the city, citizens are uniting to discourage fever victims from filing further suits. Shortly after the epidemic was checked efforts were made by a few citizens to force the city to assume all contracted debts, but local law firms were unwilling to institute legal action, and are still refusing such cases.

—Completely equipped medicine cabinets have been purchased by the Sandusky board of education and installed in the school buildings of that city. They are outfitted with remedies adequate to care for ordinary "first aid" needs.

Tuberculosis Conference in Columbus

For the first time since the Mississippi Valley conference on Tuberculosis held its initial meeting in 1912, a convention of delegates from the tuberculosis prevention societies of eleven states will meet in Columbus, September 12, 13 and 14. The conference, which will be held at the Deshler hotel, will meet under the auspices of the Ohio Public Health Association.

Delegates to the number of 1,000 are expected to attend the conference, that will consider various phases and problems of tuberculosis, which will be discussed by speakers of national prominence. The state tuberculosis prevention societies that will send representatives to the conference are those in Illinois, Indiana, Iowa, Michigan, Minnesota, Mississippi, Nebraska, North Dakota, South Dakota, Wisconsin and Ohio.

Mounting Membership of State Association Constitutes Pleasing Report for District Councilors

The membership record of the State Association represents a succession of unique accomplishments on which the organization workers of the state—primarily the councilors and the county society secretaries and other officers and their supporting members—may look with just pride. The steady climb upward cannot be interpreted as other than the honest evaluation which the medical profession of Ohio places on the worth of organization.

The year 1921 up to April 10, the day on which the accompanying compilation was prepared, stands out prominently in the series of membership achievements. On this date 4,547 members had been certified, surpassing by 177 the number on the same date last year and lacking only 230 of the total for the entire year of 1920.

A comparison of the individual county records with last year's figures shows that 39 counties are one hundred per cent.—have certified memberships equal to or greater than those of 1920.

These counties are set in black type. The four counties marked with the asterisk may also be considered one hundred per cent., although they have not succeeded in reaching their last year records. Their failure to do so is attributable to the fact that former members have died or removed from the county and no new physicians have taken their places.

The tabulation is arranged by districts in order that it may be considered as a report for the councilors of the respective districts. The comparative standing by districts and counties is interesting. Under this grouping it is gratifying to note that two districts—the Fourth and Seventh—have passed their previous high marks, and the others have deficits which can be covered before the annual meeting. In the Second, Third and Ninth Districts the shortages are so negligible that they will in all probability be overcome before the report is published.

FIRST DISTRICT

Robert Carothers, M. D., Cincinnati—Councilor.

County	Membership	
	1920	1921
Adams*	17	15
Brown	13	11
Butler	73	73
Clermont	20	16
Clinton	27	23
Fayette	15	12
Hamilton	507	434
Highland	25	21
Warren	26	27
	723	632

THIRD DISTRICT

R. R. Hendershott, M. D.,—Councilor.

County	Membership	
	1920	1921
Allen	81	83
Auglaize	30	31
Hancock*	38	34
Hardin	23	23
Logan	40	38
Marion	54	58
Mercer	26	26
Seneca	29	31
Van Wert	26	24
Wyandot	8	6
	355	354

SECOND DISTRICT

W. A. Ewing, M. D., Dayton—Councilor.

County	Membership	
	1920	1921
Champaign	25	24
Clarke	69	72
Darke	49	46
Greene*	42	37
Miami	43	45
Montgomery	178	177
Preble	18	14
Shelby	21	21
	445	436

FOURTH DISTRICT

John G. Keller, M. D., Toledo—Councilor.

County	Membership	
	1920	1921
Defiance	13	13
Fulton	27	28
Henry	24	24
Lucas	268	262
Ottawa	13	12
Paulding	21	21
Putnam	28	31
Sandusky	31	37
Williams	23	26
Wood	38	40
	486	494

FIFTH DISTRICT

R. K. Updegraff, M. D., Cleveland—Councilor.

County	Membership	
	1920	1921
Ashtabula	42	41
Cuyahoga	582	531
Erie	33	35
Geauga	9	9
Huron	25	25
Lake	27	26
Lorain	68	70
Medina	20	21
Trumbull	48	44
	854	802

SIXTH DISTRICT

E. J. March, M. D., Canton—Councilor.

County	Membership	
	1920	1921
Ashland	23	23
Holmes	12	13
Mahoning	125	117
Portage	29	23
Richland	54	54
Stark	135	132
Summit	212	202
Wayne	31	34
	621	598

SEVENTH DISTRICT

J. S. McClellan, M. D., Bellaire—Councilor.

County	Membership	
	1920	1921
Belmont	59	59
Carroll (with Stark Co.)		
Columbiana	70	79
Coshocton	19	22
Harrison	12	12
Jefferson	49	46
Monroe	7	6
Tuscarawas	44	40
	260	264

EIGHTH DISTRICT

A. B. Headley, M. D., Cambridge—Councilor.

County	Membership	
	1920	1921
Athens	52	46
Fairfield	34	30
Guernsey	27	25
Licking	47	43
Morgan	15	15
Muskingum	56	56
Noble	11	6
Perry	22	20
Washington	36	37
	300	278

NINTH DISTRICT

J. S. Rardin, M. D., Portsmouth—Councilor.

County	Membership	
	1920	1921
Gallia	26	27
Hocking	10	11
Jackson	20	20
Lawrence	31	24
Meigs	13	12
Pike*	10	9
Scioto	56	56
Vinton	5	7
	171	166

TENTH DISTRICT

S. J. Goodman, M. D., Columbus—Councilor.

County	Membership	
	1920	1921
Crawford	36	33
Delaware	21	18
Franklin	373	341
Knox	28	23
Madison	19	17
Morrow	12	11
Pickaway	24	25
Ross	38	39
Union	21	16
	572	523
Grand total	4,777	4,547

American Medical Association

Many Ohioans are planning to attend the seventy-second annual session of the American Medical Association in Boston, Massachusetts, beginning Monday, June 6, and ending Friday, June 10. Officially the Ohio State Medical Association will be represented by six delegates who are Drs. J. H. J. Upham, Columbus; Ben. R. McClellan, Xenia; C. D. Selby, Toledo; G. E. Follansbee, Cleveland; Granville Warburton, Zanesville; and W. D. Haines, Cincinnati.

The house of delegates will convene on Monday, June 6. The scientific assembly of the association will open with the general meeting held on Tuesday, June 7, at 8:30 p.m. The various sections of the scientific assembly will meet Wednesday, June 8, at 8:00 a.m. and 2:00 p.m. and subsequently, according to their respective programs.

Those sections convening at 9:00 a.m. are: Practice of Medicine; Obstetrics, Gynecology and Abdominal Surgery; Laryngology, Otology and Rhinology; Pathology and Physiology; Stomatology; Nervous and Mental Diseases; Urology; Preventive Medicine and Public Health. Those convening at 2:00 p.m. are: Surgery, General and Abdominal; Ophthalmology; Diseases of Children; Pharmacology and Therapeutics; Dermatology and Syphilology; Orthopedic Surgery; Gastro-Enterology and Proctology, and Miscellaneous.

Report of Committee on Public Policy and Legislation

COMMITTEE ON PUBLIC POLICY AND LEGISLATION

J. H. J. Upham, M. D., Chairman.....Columbus
 A. H. Freiberg, M. D.....Cincinnati
 J. B. Alcorn, M. D.....Columbus
 Charles Lukens, M. D.....Toledo
 Wells Teachnor, M. D.....Columbus
 Don K. Martin, Secretary.....Columbus

To The Ohio State Medical Association:

Thorough preparation in advance, consecutive policy and harmonious cooperation were the chief factors which brought effective results in the legislative program of the State Association during the past year.

Through careful planning during the months preceding the start of a new state administration and a new legislature in January of this year, it was possible to anticipate and to be prepared for practically every issue which has developed thus far in the first four months of the 84th General Assembly. At the time this report was written, over 600 measures had been introduced in the Ohio legislature. Over 100 of them were carefully followed by your committee from the time of their introduction. More than a score of these directly affected the medical profession and the others incidentally.

Not one measure was enacted to which the profession had voiced concerted opposition. Numerous amendments and corrective provisions were submitted by your committee and accepted by the legislature.

A special effort was made in preparation for the legislative session to establish cooperation with allied professions and with all other groups interested in health problems, and professional practice. This undertaking was most successful and resulted in concerted effort when most needed. Your committee took a leading part in the revival of the Ohio Public Health Federation in which it was joined by the Ohio State Pharmaceutical Association, the State Dental Society, the State Hospital Association, the Ohio Association of Graduate Nurses, the Federation of Women's Clubs, and the various associations of sectarian medicine and limited practice which indicated a desire to cooperate in a worthy program. In addition to this extensive plan of co-ordination, your committee was also successful in establishing a basis of mutual understanding and cooperation through the state office of the Association with the various state departments and bureaus in any way concerned with the administration of laws in which the profession is interested.

This farsighted program proved most successful in the submission of amendments to the state administrative reorganization code, House Bill No. 249, which as originally drawn would have

abolished the State Medical Board and placed the various professions without executives selected from their respective groups, under a lay director of examination. As is well known by the members of the State Association, your committee on Public Policy and Legislation has studied the problem of examination and licensure during recent years and pursuant to the action of the House of Delegates at the annual meeting in 1920, was instructed to oppose a reorganization plan which would seriously interfere with the identity of the State Medical Board and the integrity of the profession in its contact with governmental administration.

It may be safely said that the reorganization code raised a most vital issue and the profession can be congratulated on the adoption by the legislature and the acceptance by the governor of a number of amendments submitted by your committee in conjunction with other interested groups prior to the enactment by the legislature.

The reorganization committees in both the House and Senate, however, refused to accept amendments to the section of the administrative code dealing with the State Department of Health. It was the thought of your committee that the state commissioner of health should be selected by the public health council for a term of at least five years, as at present, instead of being appointed directly by the governor for a term coextensive with that of the state's chief executive, or removable at the latter's pleasure. Numerous civic, welfare and health agencies expressed their opposition to the plan contemplated in the code without avail.

The policy of your committee in adhering to a principle of public interest in the advocacy of its proposals rather than a stand for any selfish purpose, was especially successful in the defeat of destructive cult legislation. The first chiropractic bill submitted on initiative petition in the early part of the session (Initiated House Bill No. 13) was the focus for concerted cult propaganda based on misrepresentation. The legislators, however, refused to be misled, and this bill after pending in the House for several weeks, was "indefinitely postponed." A second desperate effort was evidenced in the introduction of a similar chiropractic proposal—Senate Bill No. 185, which was the storm center in the Senate for a short period, but it was also lying dormant in committee when this report was written.

The Christian Science proposal also made its perennial appearance in the form of House Bill No. 192. It met its just fate in an overwhelming defeat late in March after its proponents had lobbied and "log-rolled" in its interest for over a month, receiving only thirty affirmative

votes out of a total of 125 members of the House of Representatives.

With the policy well in mind of disease prevention and health administration in the interest of the public, your committee opposed an effort which was made to undermine the Hughes-Griswold health code. Such an effort appeared in the form of Senate Bill No. 92, and later in the form of Senate Bill No. 137, which would have limited the salaries of health commissioners in the smaller counties to part-time, inefficient service, and would have set a precedent for further inroads tending to weaken state health administration. Both these measures were defeated, the first was "laid on the table" and the second was lost by a vote of 12 yeas to 16 nays after the issue had been before the Senate for nearly two months, first in one bill and then in its successor.

Several measures modifying the workmen's compensation law were followed carefully by your committee. The one in which the profession was most interested was Bill No. 47 to include certain occupational diseases under the benefits of the workmen's compensation law. It has been generally conceded that the principle of workmen's compensation as administered in Ohio has been more fair and just than similar laws in other states, and it is also conceded that if accidents are to be chargeable to industry in which they are incurred, that sufferers from occupational diseases also incurred in industries should be likewise compensated. The chief difficulty was in drafting this law so that it would be as nearly as possible "definite and certain" and to avoid in its administration innumerable controversies. Your committee cooperated with committees from other groups in modifying and redrafting this proposal which was passed by the legislature. A complete analysis of this law will be made in an early issue of *The Journal*.

A special committee of the State Association has been cooperating with other organizations during the past year in an effort to solve, or at least to approach the crippled children problem in Ohio, and while the hopes of those interested in a series of conferences extending over many months, were not entirely met, several bills were introduced and were expected to be enacted to correct some of the present conditions. These measures include Substitute House Bill No. 218 which established a division of rehabilitation in the department of vocational education, under the state department of education, in charge of a state director of vocational education. This law is intended primarily to take advantage of the federal subsidy available to those states which make equal appropriations for the vocational training of industrial and other cripples, the chief purpose being to rehabilitate and return to gainful occupation the victims of industrial accidents. The provisions of this particular

bill are therefore limited to providing special schooling for cripples.

Senate Bill No. 174 amends the present laws relative to dependent children to extend the benefits of medical and surgical treatment to indigent or dependent crippled children who are not now properly provided for. The enforcement of this measure is under the direction of the Board of State Charities which is empowered to arrange for the treatment and education of crippled children committed to it by the juvenile court.

House Bill No. 200 deals primarily with the education of crippled children and provides the methods whereby local authorities under the direction of the superintendent of public instruction may provide for the proper schooling of crippled children in addition to the blind and deaf. While the two preceding proposals are largely state functions, the latter inaugurates a new local responsibility through cooperation among boards of education, and makes available not to exceed \$300.00 for each deaf or crippled pupil given instruction in special classes.

A tendency to extend governmental supervision over private efforts was found in a number of bills introduced in the legislature for the licensing of architects, engineers, surveyors, plumbers and sewer tappers. A proposal had been drafted and was ready to be introduced for a special licensing board in cosmetic therapy, and a similar proposal for licensing hair dressers. It was pointed out to the proponents of the cosmetic therapy proposal that the regulations under the limited practice act established by the State Medical Board, made thorough and adequate provisions for this limited branch of practice. These facts are mentioned primarily to indicate the constant effort which must be made to inform legislators and instruct public opinion to the realization that all the healing arts are and should continue to be under the direction and supervision of one central responsible board, i. e., the State Medical Board.

Limited practitioners who are sincere realize that the present laws are adequate. The cosmetic therapists have indicated a desire to cooperate with the State Medical Board in the administration and enforcement of the laws. It is significant that of all the classes of limited practitioners the chiropractors are the only group which constantly and persistently refuses to comply with the law, and organizes to defy its administration.

It was understood at the outset of the present legislative session that there would be a minimum of prohibition legislation. This subject, however, has shared the center of the stage with only such other matters of vital importance as taxation, school problems, crime solution, and reorganization. In addition to Senate Bill No. 17, adopted as an emergency measure, to provide for the appointment of a state prohibition com-

missioner, and other enforcement machinery, the legislature enacted House Bill No. 204 to extend the jurisdiction of justices of the peace throughout their respective counties in liquor law violations, House Bill No. 233 to provide an annual temperance day program in the public schools, and House Bill No. 246 to provide for the seizure and sale of conveyances unlawfully used to transport liquor. The crowning effort of the Anti-Saloon League was Senate Bill No. 178 which limits to those of intoxicating nature which may be prescribed and dispensed pure grain alcohol—or alcoholic medicinal preparations included by the federal prohibition commissioner and listed by him which are held to be suitable for use for beverage purposes. The primary purpose of this proposal was to prevent the "Palmer ruling" on "medicinal beer" from becoming operative in Ohio. As originally drawn, however, Senate Bill No. 178 would have made it impossible for any physician to prescribe any drug containing more than one-half of one percent of alcohol unless he took out a federal liquor permit. The medical profession and the State Association have consistently supported the principle of prohibition, but some ardent advocates have made it necessary that legislation on these subjects be watched carefully to prevent their being carried further than intended, in such a way as to interfere with legitimate medical practice. Several amendments were secured to this bill and while the proposal had passed the Senate, it was still pending in the House at the time this was written, and still further amendments were in the course of preparation for submission to the temperance committee of that branch of the Assembly.

The Committee on Health Education, of the State Association, cooperated with the legislative committee in conjunction with other agencies on a proposal for physical education in the schools. This proposal took the form of House Bill No. 133, but was caught in a jam of other school legislation including 44 other measures dealing with various phases of the school question, and was defeated by a scant margin of seven votes. A similar measure—Senate Bill No. 199—was later defeated by a small margin. While your committee was interested in the principle incorporated in these bills, and advocated their enactment it was unwise in view of the prejudice among members of the legislature against unlimited school legislation, to demand the enactment of this particular proposal. The educational work, however, among the members of the legislature on a bill of this nature should be helpful in having the principle adopted at some future time.

As an example of the efforts and activities of your committee in securing amendments and corrections, Senate Bill No. 57 was introduced to overcome the unforeseen error in a law enacted last session which has prevented the payment

by the Probate Court to physicians called as experts in lunacy cases unless the patient was "committed" to an institution. Senate Bill No. 57 not only provides for the compensation to physicians for their services regardless of the findings in the particular case, but it further provides for their direct remuneration by the court instead of being compelled to look to the family of the patient so examined. This bill had passed the Senate and was pending in the House the middle of April, with the assurance from members of the "jitney" committee, that it would be enacted before adjournment.

A direct interest was taken in proposals pending in the finance and taxation committees during April which would provide adequate funds for state colleges, including the Ohio State University, with a tentative promise from the finance committee for a two year appropriation of \$80,000 for building purposes at state educational institutions, with contemplated additional medical college facilities and an adequate hospital in connection with the medical school at the State University. If House Bill No. 325 which was enacted in the lower branch of the General Assembly, and which was pending in the taxation committee in the Senate, providing for one-eighth mill levy for this particular purpose, should be passed as anticipated the assurance from the finance committee would make much needed extensions possible at the state's medical college.

Having in mind the many angles and the different alignments in the legislature, your committee was careful to take a definite and positive stand only on those issues in which the profession is thoroughly united. It avoided all incidental issues in controversy, believing that if it were to serve the profession as a whole and the members individually, it should avoid the adoption of a definite position represented by only a portion of the profession. It was only with great care that embarrassment was avoided on Senate Bill No. 184 which was introduced for the purpose of repealing that section of the present medical practice act which permits a registered nurse to administer anesthetics under the direction and in the presence of a licensed physician. The wisdom of neutrality on this particular question was proved when the opposing sides to the controversy clashed at a hearing on the bill before the public health committee of the Senate. Your committee feels that the proper solution of this problem can and should be reached harmoniously by the groups in the profession especially interested, the surgeons and anethetists.

In conclusion your committee desires to express the most cordial appreciation for the thorough and consistent cooperation of the legislative committeemen in the various county societies, in whose hands rested the success of the Association's program.

Your committee respectfully urges that not

only the legislative committeemen but the officers and members of the respective county societies continue to maintain their close contact in local, civic and social affairs so that the ideals of the profession may be more thoroughly understood by the public and public representatives.

Your committee not only considers it a pleasure but also a duty to express appreciation to the two physician members in the legislature—"Senator" Dr. LeFever, and "Representative" Dr. Talley, whose service and adherence to the best thought in the profession was reflected among their associates. This report would be incomplete without a compliment to the presiding of-

ficers in the legislature—Lieutenant Governor Clarence J. Brown in the Senate and Speaker Rupert R. Beetham in the House, whose fairness in all questions of health and welfare is well established.

While the majority of the legislators deserve credit for their correct attitude on questions of public interest, special commendation may also be properly expressed to Senators Whittemore, Kryder, Day, Demuth, Chatfield and DeWeese, and to Representatives Crabbe, Freeman, Silver, Wenner, Chester, Carpenter, Cooley, Robins and Wendt.

J. H. J. UPHAM, CHAIRMAN

Report of Committee on Hospital Standardization

COMMITTEE ON HOSPITAL STANDARDIZATION

Andrews Rogers, M. D., Chairman.....	Columbus
C. F. Hoover, M. D.....	Cleveland
Robert Carothers, M. D.....	Cincinnati
Don K. Martin, Secretary.....	Columbus

To The Ohio State Medical Association:

Your Advisory Committee on Medical Education and Hospital Standardization desires to report as follows:

The committee met as a whole in Columbus in February and considered the work done throughout the year by the individual members in their respective districts.

No new hospitals have signified their desire to qualify as institutions furnishing a fifth medical or interne year. The work has therefore, consisted in the reconsideration of hospitals placed in Class B, that is those institutions that do not at present offer a suitable interne year from the point of view of medical instruction but that could be made so to do.

The committee both individually and as a whole has been unable to change the grading in any of these institutions in the past year. If none were advanced from Class B to Class A however, none were demoted to Class C.

The committee feels very strongly in regard to the following: It desires to call the attention of the Association again to the fact that it was appointed as an advisory committee to the Council on Medical Education and Hospital Standardization of the American Medical Association and that the work has not been at all advisory but actually field work. Further it feels that a more definite effort should be made by both the American Medical Association and the State Medical Association to have it clearly understood that this is a classification based upon the possibility of a fifth year in medicine, or the requirement of a year's internship for

graduation. It is in no way a classification on professional merit.

From time to time requests have come from some of the institutions that have failed to qualify in the Class A division for constructive criticism or definite instructions as to what they should or must do to so qualify. The Council of the American Medical Association has never furnished any specific directions of this kind. All that has come from the Council in this matter is contained in a small brochure that has been sent to every hospital in the country and can be secured upon request from the Council at their Chicago office. This, although small, is adequate in its conception and with it as a guide any hospital that could furnish an acceptable fifth medical year would be able to work out its own salvation.

It must be perfectly apparent that a small group of men composing the State Advisory Committee can only be expected to pass on existing conditions and that it is unreasonable to expect them to devote the amount of time necessary to formulate a working plan for any institution that they may find that they are unable to place in the Class A list.

ANDREWS ROGERS, CHAIRMAN.

A Splendid Record

Summit County's grand old man, Dr. E. K. Nash, of Akron, celebrated his ninety-third birthday on April 20. Dr. Nash graduated from Western Reserve University in 1861 and served as a surgeon in the Fourteenth Volunteer Infantry during the Civil War. He is a life member of the Ohio State Medical Association and the Summit County Medical Society and since October, 1914, has missed only four meetings of the latter society.

Report of Committee on Auditing and Appropriations

COMMITTEE ON AUDITING AND APPROPRIATIONS

S. J. Goodman, M. D., Chairman.....Columbus
J. S. McClellan, M. D.....Bellaire
John G. Keller, M. D.....Toledo
Don K. Martin, Secretary.....Columbus

To the Ohio State Medical Association:

Your committee presents for its report for the year ending December 31, 1920, the official statement of Mr. H. A. Keller, certified public accountant, who is employed to audit the books of the Association and *The Journal*. No detailed explanation of the items contained therein is believed necessary, but a brief outline of the committee's process of checking receipts and regulating expenditures is timely.

At the beginning of each year the Committee on Auditing and Appropriations meets and gives careful consideration to the proposed expenditures, authorized by the constitution and approved by the House of Delegates, for the current year. It estimates the probable amount that will be received by the State Association from membership dues. Each of the Association's activities is then budgeted and to each separate activity is assigned a certain amount of money for use during the year, subject to approval by the House of Delegates at its annual session. No activity can draw money from the Association treasury except on voucher which bears the signed approval of the members of the Auditing and Appropriations Committee, and that committee permits no activity to draw an amount in excess of the budget appropriations.

The system of handling receipts is simple. The treasurers of the county societies collect annual dues from their members and remit the State Association's share to the Executive Secretary at Columbus. He issues to the county society a serially numbered receipt. He then deposits this money in the Citizens Savings Bank and Trust Company, of Columbus, to the credit of the Ohio State Medical Association. Checks against this account can only be drawn by the Executive Secretary (Mr. Martin) in favor of the Treasurer, Dr. Platter. Bank deposit slips are made out in duplicate and certified by the bank.

As previously stated, all disbursements are made through the Treasurer, Dr. Platter, on voucher approved by the members of the Committee on Auditing and Appropriations. In making such disbursements the Treasurer is guided by written directions from the committee. The Association is further protected from defalcation by surety bonds given by the Treasurer, the Executive Secretary, and the bookkeeper for *The Journal*.

Auditor's Statement

Dr. S. J. Goodman,
Chairman, Auditing Committee,
Ohio State Medical Association.

Dears Sir:—

In accordance with your instructions I have audited the books and accounts of the Ohio State Medical Association, for the year ended December 31, 1920, and submit herewith report including as a part thereof the following exhibits, viz.:

Exhibit A: Statement of Receipts and Disbursements for the year ended December 31, 1920.

Exhibit B: Statement of Bank Reconciliation with the books at December 31, 1920.

AUDIT—All receipts were verified and traced to the original source. All disbursements were verified by examination of properly approved cancelled checks supported by invoices. Cash as shown by the books at December 31, 1920, was reconciled with the balance as shown by the bank at that date. Certificates of deposits were verified by actual inspection.

I therefore certify that the statements herein correctly state the receipts and disbursements of the Ohio State Medical Association for the year ended December 31st, 1920, and the resultant cash balance at that date.

Respectfully submitted,

(Signed) H. A. KELLER,
Certified Public Accountant.

EXHIBIT A—STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS FOR YEAR ENDED DECEMBER 31, 1920.

Cash on Deposit at January 1, 1920.....	676.89	
Certificates of Deposit.....	5,000.00	
Total		5,676.89

<i>Receipts:</i>		
Membership Dues	23,820.50	
Annual Meeting	3,150.00	
Interest	272.08	
Total Receipts		27,242.58
Total to be Accounted for.....		32,919.47

<i>Disbursements:</i>		
Ohio State Medical Journal....	9,000.00	
Executive Secretary's Salary	4,583.34	
Annual Meeting	3,420.74	
Medical Defense	2,074.06	
Postage and Telegraph.....	535.01	
Stationery and Supplies.....	441.10	
Executive Secretary — Expense	322.82	
Treasurer—Salary	300.00	
Council	298.42	
Medical Education.....	285.73	
Legislative	193.60	
Auditing	100.00	

Premium on Bonds:

Don K. Martin.....	10.00	
H. H. Platter.....	10.00	
Miss A. B. Haney....	5.00	25.00

Total Disbursements Ac-	
counted for	21,579.82

Balance on hand and Deposit	
at December 31, 1920.....	11,339.65

EXHIBIT B—STATEMENT OF CASH RECONCILIATION
AT DECEMBER 31, 1920.*The Huntington National Bank:*

Balance as per Bank		
Statement December		
31, 1920.....	3,484.69	
Less Outstanding Checks:		
#316 Ritter Multi-		
graphing Bureau....	4.75	
317 J. M. Thomas....	15.00	
318 Marysville Tri-		
bune	112.25	
320 H. M. Platter....	25.00	
321 S. J. Goodman....	4.00	161.00
Book Balance at De-		
cember 31, 1920.....	3,323.69	
Certificate of Deposit	8,000.00	
Cash on hand	15.96	
Balance on hand and		
Deposit at December		
31, 1920	11,339.65	

Budget for 1921

At a meeting held on January 2, 1921, the Committee on Auditing and Appropriations estimated the receipts from membership dues during the year would be at least \$20,000. After careful consideration of the needs of the coming year, your committee made the following apportionment of funds, which has been approved by Council, and is herewith presented to the House of Delegates for official indorsement.

Journal	\$12,000.00
Treasurer, salary.....	300.00
Executive Secretary, salary.....	5,000.00
Executive Secretary, expense.....	400.00
President, expense	100.00
Council, expense.....	400.00
Annual Meeting	500.00
Medical Education	400.00
Auditing and Appropriations.....	200.00
Medical Defense.....	5,000.00
Stationery and Supplies.....	600.00
Postage and Telegraph.....	600.00

Condensed Accountant's Report of The Journal for Year Ended
December 31, 1920

ASSETS

Cash in Office.....	25.00	
Cash in Bank.....	366.19	
Total Cash.....	391.19	
Accounts Receivable.....	592.57	
Liberty Bonds.....	300.00	892.57
Furniture and Fixtures.....	599.76	
Total Assets.....	1,883.52	

LIABILITIES

Subscriptions Prepaid.....	17.50
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SURPLUS

Surplus at Dec. 31, 1919.....	1,897.71
Net Loss for year ended Dec.	
31, 1920.....	31.69
Surplus at Dec. 31, 1920.....	1,866.02
Total Liabilities and Surplus	1,883.52

REVENUE

Circulation	9,045.75
Subscriptions	9,000.00
Advertising	7,862.00
Interest	12.00
Total Revenue.....	25,919.75

EXPENSES

Journal Printing.....	9,470.25
Subscriptions	9,000.00
Office Salaries.....	5,050.00
Stationery, Printing and Sup-	
plies	954.05
Rent	600.00
Journal Postage.....	375.01
Bad Debts Written Off.....	203.93
Telephone	183.45
Traveling Expense	62.60
Depreciation	52.15
Total Expenses.....	25,951.44

Net Profit—Loss—for the	
year ended Dec. 31, 1920....	31.69

I have audited the books and accounts of the Ohio State Medical Journal for the year ended December 31, 1920, and hereby certify that the statement as shown above correctly states the financial condition of the company at December 31, 1920, and the resultant loss for the year ended at that date.

(Signed) H. A. KELLER,
Certified Public Accountant.

Columbus, Ohio, January 21, 1921.

Report of the Publication Committee

PUBLICATION COMMITTEE -

L. L. Bigelow, M. D., Chairman.....Columbus
 E. R. Brush, M. D.....Zanesville
 D. V. Courtright, M. D.....Circleville
 Don K. Martin, Secretary.....Columbus

To The Ohio State Medical Association:

Pursuant to previous policy, it has been the purpose of the Publication Committee to constantly increase the value of *The Journal* to the State Association or the profession as a whole, and to the individual members. With this thought in mind, it has been our purpose through *The Journal*, to thoroughly represent the thought and policy of the profession, to reflect the objects, purposes and activities of the Association, to advance scientific medicine, and to promote the general interests of the physician.

It has been the purpose of *The Journal* to reflect and chronicalize the work of the various committees, bureaus and departments as well as the Council of the Association, and to promote unanimity of sentiment on those matters in which the profession is directly interested, for example: the principles of the Committee on Public Policy and Legislation have been expressed and their arrangements promulgated through the editorial columns of *The Journal* in conjunction with the effective activities of the county legislative committeemen who have been constantly informed of latest developments through special bulletins designed for this purpose. In this way the problems of the profession have been presented to the membership and valuable information thoroughly disseminated.

Your committee feels justified in stating that *The Ohio State Medical Journal* has contained more valuable information of a practical nature dealing with medical practice than any other similar publication. This is particularly true of the timely publication of the changes in regulations of various federal and state departments, in any way affecting medical practice, as well as court decisions, legislative developments, and other facts of economic and social value to the profession at large.

Having in mind the important purposes of *The Journal* as a source of information and a medium of expression, constant thought has also been given to the development and enhanced value of the scientific pages. The plan inaugurated the previous year of a medical editor to supervise and edit all original scientific communications, has extended to a department for medical comment covering scientific advances with reviews of new therapeutic methods. By planning in advance it has been possible to devote the scientific pages of various issues of *The Journal* to symposiums on special subjects of

general scientific interest, thus avoiding a patchwork of medical and surgical topics necessitated by a less careful system.

With the gradual and constant increase in publication costs, it has been the hope of your committee to justify increased appropriations requested from the Association's funds, for the maintenance and publication of *The Journal*, believing that *The Journal* is the cornerstone in organization benefits. The committee feels that it has been justified in the expenditures which were necessitated and in spite of the fact that the net receipts from advertising have failed to equal printing, paper and mailing charges, it has been possible to adhere to the well-established policy of accepting only advertising of a proved and ethical nature.

It has occurred to your committee that a special department might be inaugurated in *The Journal* as an open forum for the discussion of any topic of interest by the individual members with perhaps a reasonable limitation on the length of such communications. Your committee welcomes any suggestions which will add to the interest and value of the publication, and if there is a representative request for such a department as mentioned, or other special features, they will be inaugurated.

On the opposite page will be found the auditor's report, including costs and appropriations which properly may be considered a part of this report.

It is felt that no detailed or exhaustive report should be necessary from this committee, as *The Journal* from month to month has spoken for itself, and constitutes a consecutive report for the year.

While your committee feels a pardonable pride in *The Journal*, it realizes that there are greater possibilities in developing its value and benefit to the membership. With a gradually increased enrollment, we are confident that advancement and progress are not only possible, but inevitable.

L. L. BIGELOW, CHAIRMAN.

Ohioan to Roumania

Dr. R. L. Vioran of Akron, a former member of the State Association, who has answered the appeal of the government of Roumania for aid in combatting the epidemics that are prevalent there, left this country, April 24, traveling via Italy, Greece and Constantinople. Dr. Vioran has been commissioned a lieutenant in the Royal Army Medical Corps for service against Russia if the Bolshevik carry out their expected attack on Roumania. His father, Dr. L. Vioran of Akron, was a major in the same corps and served with it in the Russo-Turkish War, 1877-78, when Roumania was allied with Russia against Turkey.

Report of Committee on Health Education

COMMITTEE ON HEALTH EDUCATION

E. Otis Smith, M. D., Chairman.....	Cincinnati
P. B. Brockway, M. D.....	Toledo
A. G. Helmick, M. D.....	Columbus
J. O. Howells, M. D.....	Bridgeport
G. E. Robbins, M. D.....	Chillicothe
Don K. Martin, Secretary.....	Columbus

To The Ohio State Medical Association:

Probably the greatest factor in preventive medicine is health education. The most effective period for instruction in the problems of health is in early life before the health of the individual has become impaired. In these early years the mind and body are most receptive and what is learned in the first few years in school makes a lasting impression.

The legislature had before it for consideration a bill that would have provided for what seemed to be a logical and profitable program of physical instruction for all school children in Ohio. This bill did not become a law; however the general discussion of this subject has been helpful and will make future legislation on this subject easier.

While compulsory physical education is not yet possible in this state, it should not follow that no instruction on health topics is to be given. In the larger cities of the state the children already enjoy the advantage of health instruction, including calisthenics. All teachers, who are qualified to instruct in calisthenics, should be encouraged to do so unless such instruction is already provided for. A teacher should, and most of them do, have in mind the best possible development of their pupils. Teachers, more than others, appreciate that in order to have a sound mind a pupil must have a sound body.

It requires no argument to establish the fact that health education is beneficial. Members of the Ohio State Medical Association should encourage, aid and support all proper efforts made toward the wider dissemination of health education, where it will be of greatest good to the greatest number.

It is therefore recommended that the house delegates of the Ohio State Medical Association go on record as favoring health education in the public schools of this state.

E. O. SMITH, CHAIRMAN.

Report of the Committee on Medical Education

COMMITTEE ON MEDICAL EDUCATION.

Charles E. Briggs, M. D., Chairman.....	Cleveland
Ben R. McClellan, M. D.....	Xenia
William D. Porter, M. D.....	Cincinnati
Don K. Martin, Secretary.....	Columbus

To The Ohio State Medical Association:

Following the custom existing for several years, the Committee on Education arranged for a lecture on "Fundamental Considerations in Pediatrics," by Dr. H. J. Gerstenberger, of Cleveland, Professor of Pediatrics in Western Reserve University School of Medicine. This lecture was given at ten points throughout the state between September 7 and November 23, 1920, as shown in the schedule below. The details of the meetings were arranged by the executive secretary, with the assistance of the local societies.

The committee desires to express to Dr. Gerstenberger on behalf of the Association its most sincere appreciation of the splendid and generous service which he rendered the profession of the state in this undertaking, and to the executive secretary for the efficient manner in which the details of the meeting were arranged.

SCHEDULE

Athens, Tuesday, September 7.—For physicians in Athens, Morgan, Perry, Washington Counties, and by special invitation, physicians in Wood County, W. Va. Attendance 50.

Chillicothe, Tuesday, September 9.—For physi-

cians in Tenth District, consisting of Crawford, Delaware, Franklin, Knox, Madison, Morrow, Pickaway, Ross and Union. Attendance 200.

Canton, Tuesday, September 21.—For physicians in Stark, Summit, Portage, Holmes, Tuscarawas and Wayne Counties. Attendance 160.

Dayton, Friday, September 24.—For annual District Chautauqua, consisting of counties in Second District: Champaign, Clark, Darke, Greene, Miami, Montgomery, Preble, Shelby.

Marion, Wednesday, September 29.—For physicians in Marion, Logan, Morrow, Hardin, Wyandot, Crawford and Richland Counties.

Zanesville, Thursday, September 30.—Annual meeting of Eighth District including Muskingum, Licking, Coshocton, Guernsey, Noble, Fairfield, Morgan and Knox Counties. Attendance 160.

Gallipolis, Thursday, October 7.—Annual meeting Ninth District comprising Gallia, Hocking, Jackson, Lawrence, Meigs, Pike, Scioto, Vinton.

Youngstown, Tuesday, October 19.—For physicians in Mahoning, Ashtabula, Geauga, Lake, Trumbull, Portage, and Columbiana Counties.

Lima, Tuesday, November 16.—For physicians in Allen, Auglaize, Mercer, Van Wert, Paulding, Putnam, Hardin, Hancock Counties. Large attendance reported.

Steubenville, Tuesday, November 23.—Annual meeting of Seventh District, comprising Belmont, Carroll, Columbiana, Coshocton, Harrison, Jefferson, Monroe and Tuscarawas Counties.

CHARLES E. BRIGGS, CHAIRMAN.

Report of General Secretaries Committee

GENERAL SECRETARIES COMMITTEE

Wells Teachnor, M. D., Chairman.....Columbus
 Charles R. Keller, M. D.....Mansfield
 Reyburn McClellan, M. D.....Xenia
 G. S. Mytinger, M. D.....Chillicothe
 Don K. Martin, Secretary.....Columbus

To The Ohio State Medical Association:

The General Secretaries Committee is a constitutionally created committee, consisting of three county secretaries, appointed by the president, and ex-officio the president-elect of the State Association. The duty of this committee, as set forth in the constitution, is to devise ways and means of assisting and stimulating the work of the county secretaries, to assist or suggest in the arrangement of programs for county meetings, to formulate and supply or suggest letters or other means of assisting the county secretaries in increasing the membership of their respective societies.

Shortly after organization of the committee with the above personnel a meeting was held in the Columbus offices of the State Association to determine by what means the committee could best serve the purposes for which it was created. Inasmuch as each county society has problems peculiar to it, which obviously cannot be reached individually by the committee, it was decided to revive the custom of holding a joint conference of secretaries with the committee for the discussion of mutual problems and such special ones as might evolve from the discussion.

Accordingly, a conference was held at the Hotel Deshler, Columbus, on January 2, with an attendance of eighteen secretaries and members of council and officers of the association. The conference was very successful and will doubtless have a marked influence in stimulating medical organization work throughout the state by reason of the many helpful suggestions for secretarial work that were brought out, and which form the basis for recommendations which your committee will offer in the following paragraphs. A rather complete account of this conference published on page 111 of the February issue of *The Journal* may properly be considered a part of this report, although limited space prohibits its reproduction here.

Your committee believes that the great benefit derived from the January conference of secretaries warrants the permanent reestablishment of the custom of holding at least one such conference each year, preferably at the time of the annual meeting. This might very well take the form of a luncheon meeting, supplanting the annual one hundred per cent. luncheon which has featured past meetings and which has now served its purpose of stimulating early collection

of membership dues. At the request of the committee, the time allotted to this luncheon in the coming meeting has been extended and arrangements have been made to include all county societies, thereby permitting wider and more complete discussion of organization matters—a plan which it is hoped will be found workable in future years.

After careful consideration the committee finds that the secretaries have their work systematized to an excellent degree, and practically the only urgent need for improvement seems to lie in the keeping of careful records. This is substantiated by the not infrequent requests which come to State Association headquarters from secretaries for lists of their paid-up members, etc. To meet this need the committee recommends the adoption of a card index book-keeping system similar to the one used in the Columbus offices of the State Association, which would be adaptable to practically every county society.

The cards used for this purpose should be of good quality paper and might conveniently be six by four inches in size to fit regulation file boxes. These cards should be lined horizontally and divided into five perpendicular columns, starting at the left with such headings as: Year for which dues are paid; amount received; date of receipt; amount remitted to State Association; date of remittance to State Association. Across the top of the card there should be space for the physician's name, local address and county.

As the entries on this record may be made small in pen, the horizontal lines may be printed close together, thereby providing space for a record of at least fifteen years on each card. The cards may be conveniently filed in alphabetical order and divided by letter guides to facilitate ready location, in small cabinet file boxes with covers for protection from dust. There should, of course, be two file boxes in order that the cards of members paid up for the current year may be transferred and kept separate from the others.

In addressing the January conference of secretaries, the chairman of this committee suggested that the county secretary maintain a card index of every physician in his county, showing the name, age, nativity, address, preliminary education, medical colleges, date of state certification, society memberships, official positions, previous locations and specialty, if any. Your committee deems this suggestion worthy of repetition and recommends that the reverse side of the book-keeping record cards be utilized for this information, which is obtainable from the State Board of Medical Registration and will be found helpful in many ways.

Although the impossibility of adequately compensating the secretary is apparent, the commit-

tee recommends that some measure of gratitude for his efforts be expressed through payment of his annual dues from the county society treasury. This custom was formerly followed in nearly all societies but now seems to have been dropped in many. Increased realization for the need of organization activity has made the duties of the secretarial office more arduous than ever before, and payment of his dues by the society is one of the small courtesies which may be extended in return for the sacrifice of time and effort which every conscientious secretary is called upon to make in keeping up the efficiency

of his society. Prompt collection of dues, formulation of scientific programs, arrangement of social and other functions tending to promote harmonious cooperation, and establishment of contact with civic and state affairs, are a few of the big things which the secretaries are doing in the interest of the profession as a whole, in addition to countless small services through which they are making medical organization more valuable to the individual physicians of their societies.

WELLS TEACHNOR, CHAIRMAN.

Report of Committee on Control of Cancer

COMMITTEE ON CONTROL OF CANCER

Andre Crotti, M. D., Chairman.....Columbus
C. W. Moots, M. D.....Toledo
J. Louis Ransohoff, M. D.....Cincinnati
Don K. Martin, Secretary.....Columbus

To The Ohio State Medical Association:

The "Cancer Week" last May was in many respects a great success and met with enthusiasm from the laity as well as from the profession. Numerous cancer lectures were given in the majority of counties and were well attended by the public. The public seemed to be very eager and grateful for the effort made and also very willing to cooperate with the profession.

Editorial articles for newspaper consumption were set up in type and sent to the majority of the daily papers of the state. Quite a number of the newspapers made use of these articles.

This winter the educational cancer campaign has been kept up in a more or less quiet way, medical meetings being held in the various county societies where the subject of cancer was given a prominent place on the program, and where public meetings took place.

The committee has deemed it advisable to change the date of the "Cancer Week" from May to the early fall because the former time usually conflicts with the activities and preparations for the various medical meetings taking place during the spring, such as the Ohio State Medical Association and the American Medical Association. Furthermore, last year many of the speakers complained of the bad conditions of the country roads and of the consequent difficulty of getting about. It was therefore deemed expedient to change the time from spring to early fall. This time of the year was selected because the weather is usually pleasant, thus making travel easier and more pleasant, and because, too, the various medical societies have not yet struck the full swing of their winter activities, and have therefore more time to devote to meetings of this kind than in the spring.

The character of the campaign next fall will

assume the same type as that carried on last year, i. e., the "Cancer Week" will be devoted to the purpose of giving talks on cancer for the benefit of the laity. These meetings will be held in all the counties of the state during "Cancer Week." The speakers will be chosen by the chairmen of the various county societies to whom the cancer campaign for their respective counties will be entrusted. A greater effort will be made to secure the better cooperation of the daily press and possibly, too, of the moving pictures.

The formation of mixed committees, composed of physicians and laymen, will be pushed energetically. The duties of these committees will be to arouse a greater sympathy and interest on the part of the layman, and to secure funds for a more aggressive and active work in the future. Such a committee has been founded in Cincinnati by Dr. Joseph Louis Ransohoff and the example ought to be followed in all the important centers of the state.

The cancer campaign would be helped considerably if a permanent organization on cancer activities could be provided for by the Ohio State Medical Association.

ANDRE CROTTI, CHAIRMAN.

Honors for Dr. Bunn

In recognition of his services at Salem during the typhoid fever epidemic last fall Dr. William H. Bunn of Youngstown, has been honored by an invitation from Sir James Mackenzie of Scotland, a noted authority on diseases of the heart and an author of many medical works, to join him in research during the coming summer.

Dr. Bunn sailed on the *Imperator* for Edinburgh, April 28, for a stay of at least three months at Edinburgh and St. Andrews Institute of Clinical Research at St. Andrews, Scotland. His invitation came through Professor Henry A. Christian of Harvard University, who directed the medical survey made at Salem during the epidemic, with Dr. Bunn as his assistant.

Report of Committee on Medical Defense

COMMITTEE ON MEDICAL DEFENSE

J. E. Tuckerman, M. D., Chairman.....Cleveland
 W. H. Snyder, M. D.....Toledo
 C. T. Souther, M. D.....Cincinnati
 Don K. Martin, Secretary.....Columbus

To The Ohio State Medical Association:

Your committee takes pleasure in presenting to you a brief summary of the medical defense matters referred to it from January 1, to December 31, 1920.

Eight suits and seven threats of suit were in the hands of the Association counsel on January 1, 1920. During the year twenty-eight members asked for advice. Of fourteen suits; in two, Association defense was forfeited by the members' neglect to pay dues on time; four are in the hands of the Association's counsel; in one, a case involving the establishment of a vital precedent, our counsel on request of a private company submitted a brief and participated in the oral argument before the Supreme Court of Ohio; in three, at the request of the private companies, the committee has ascertained the facts and consensus of expert opinion upon points involved.

During the year two suits conducted by the Association's counsel were terminated by verdicts in favor of the physicians; four were dismissed; and six threats of suits in which local attorneys had been retained were dropped.

On December 31, 1920, there were in the hands of the Association's counsel, aside from matters under advisement, five suits, and one threat of suit in which local attorneys have been retained. Since then one suit has been added and one probably terminated.

It will be seen that the year 1920 was marked by an epidemic of malpractice actions, the number referred to the Association having exceeded the number referred in any two previous years since establishment of the defense fund in May, 1916. The cooperation of the county defense committeemen and the support of the individual members of the local societies were invaluable in handling these matters and the state committee wishes to express its appreciation for this help.

The plan and operation of the Association Medical Defense have been explained in detail in other reports and in various *Journal* articles, so that its scope and purpose are understood by the Association membership and need not be gone into here. However, a few points which have been emphasized during the five-year experience in the medical defense field deserve repetition.

Your committee continues to find that the majority of actions referred to it arise from the alleged improper reduction and treatment of fractures, and occasion is therefore taken to urge

strict compliance with Rule No. 7 of the rules and regulations governing the defense fund. This rule requires the use of X-ray plates in all cases of fracture or suspected fractures—a procedure which every physician recognizes as a protective measure to the patient, himself and the Association.

It is pleasing to note that the subject of fractures from the surgical, medical and legal viewpoints will be considered at the joint session of the scientific sections on the last morning of the Columbus annual meeting. Mr. Leroy Eastman of Toledo, a member of the legal firm which represents the Association as general counsel, will discuss the legal phases and no doubt throw some interesting light on the subject.

The fact that protection in two instances was withheld because of the defendant physicians' lapse in membership justifies the committee in calling attention to the necessity of prompt payment of dues if the member is to receive the benefit of this important Association service. The regulations state that a member will not be defended in case of suit if the alleged cause of suit occurred or the suit was filed during a period for which the member is or was in arrears.

Summing up the Association's defense activities, their scope and limitations, the committee reiterates a statement which it recently made: The purpose of medical defense is to defend. It will not seek settlements, it will not pay indemnities, it will not relieve a physician of his professional responsibility, nor protect a member from a liability which is the just outcome of his acts. Its purpose is to see that no injustice is done a member, to make the sand-bagging of physicians with threats of suits unprofitable; to bring it about that no suit shall be filed against a physician except when the facts are such as to make the filing of suit almost equivalent of a verdict in favor of the plaintiff. Whatever tends to bring this about is the business of the Association's medical defense.

J. E. TUCKERMAN, CHAIRMAN.

Appointed to Army Post

Dr. D. B. Virtue, of Iberia, has been appointed a surgeon in the United States Public Health Service with the rank of major and will be stationed at Fort Thomas, Kentucky. Dr. Virtue is an ex-president of the Morrow County Medical Society and for 24 years has been a member of the board of pension examiners in Morrow County. He served assignments during the recent war at Camp Sherman, Fort Sheridan and Camp Pike.

OHIO HOSPITAL NOTES

What is the basis upon which a city may measure the community contributions of its hospitals? Discussion of this question at a recent meeting of the Toledo Hospital Council brought out that this contribution partly depends upon the bed capacity of the institution and partly upon the total number of days of care given throughout the year. It is also influenced by the number of free days of care given patients and free service rendered. It was shown that an average of 20 per cent. actually pay their way in the hospitals, that 65 per cent. only partly pay their way, and that 15 per cent. do not pay at all.

—Ground will be broken about June 1 for the new East Cleveland hospital. The building will cost \$600,000, of which \$500,000 has already been raised by the city through taxation and bequests.

—At a conference with the State Board of Administration in Columbus, March 25, Dr. G. G. Kineon, superintendent of the Epileptic Hospital, Gallipolis, called attention to the crowded condition of that institution and strongly urged upon the board the necessity for two additional cottages, to cost at least \$100,000, to accommodate a part of those who are entitled to state treatment. In making appropriations for the state institutions, the finance committee of the House of Representatives indicated that only \$60,000 might be allowed to the Gallipolis Hospital, whereas \$300,000 had been requested.

—The fortunes of Springfield Lake Tuberculosis Sanitarium, which for ten years had a stormy career under the joint ownership of a group of northeastern Ohio counties and was finally taken over by Summit County, have taken a new turn with the appointment of a business manager for the hospital. The new arrangement will relieve Dr. Clarence Hyde, the superintendent, from detail work and permit him to give more time to clinics that have been established throughout the county.

—The State Board of Administration is considering the taking over by the state of Longview Hospital for the Insane, Cincinnati, operated by Hamilton County. This step would enable the state to create a new district for the care of the insane, and by transferring excess patients from other hospitals, make a great saving in the matter of new buildings. Hamilton County commissioners have offered to lease the property to the state for an annual rental of \$60,000, with a privilege of purchase at any time for \$1,500,000.

—Under recent ruling of the Akron city council, local hospitals will receive a per diem rate of pay from the city for the treatment of indigent

patients. The amount will vary from month to month, based on the operating expenses of the institutions, and replaces the flat rate offered by the city the first of the year.

—With 23 more patients treated in 1921 than in 1920 at the Franklin County Tubercular Hospital and a record of 2,846 more patient days, the hospital was operated at a saving of over \$1,200, or a per capita saving of 15 cents a day, as compared with the cost of operating for the preceding year. Three hundred and ninety-four patients were treated at the hospital at a cost of \$63,982.04, or an average daily cost of \$1.63 for each patient. One hundred and seventy-nine were discharged as arrested cases and 84 died. Eighty of the patients were from without Franklin County and 43 were ex-service men. The average stay of a patient was 106 days.

Communication From Elyria

Dr. F. H. McMechan, Medical Editor,
The Ohio State Medical Journal.

Dear Doctor:

At a recent meeting of the staff of the Elyria Memorial Hospital it was decided to give you the facts relative to a recent attempt by the superintendent, Miss Sue Z. McCracken, and the the manager, Mr. F. E. Allen, to force upon the doctors for anesthetic service at the Elyria Memorial Hospital a nurse anesthetist, who is a graduate nurse, having recently completed a short course of instruction in anesthesia at Lakeside Hospital, Cleveland.

This new arrangement was attempted without a suggestion from the staff and without being announced to the staff. The physicians of Elyria, using the hospital, being thoroughly familiar with the meaning of such an attempt to remove certain strictly professional responsibility from them, remonstrated at once with the trustees of the hospital, requesting the immediate discharge of the nurse anesthetist and a complete change in the management of the hospital.

Pending such change physicians in Elyria individually withheld much patronage from the hospital. The trustees consulted Mr. F. E. Chapman, manager of Mt. Sinai Hospital of Cleveland, and have since placed the matter of reorganization in his hands.

The staff of Elyria Memorial Hospital, numbering 18 physicians and surgeons, in Elyria, and who are members of Lorain County Medical Society are opposed to nurse anesthetists, believing that the management and administration of general anesthetics should be given only by a physician.

(Signed) The Staff of Elyria Memorial
Hospital.

C. O. JASTER, M. D.,
Secretary-treasurer.
March 29, 1921.

The National Pathological Laboratories of Michigan

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Ohio Cities Vie for Selection as Site of Child Health Demonstration

Preliminary plans for a child health demonstration, unique in character and scope and promising to prove of first importance in the general movement for conservation of child life and health, have been announced by the National Child Health Council, with headquarters in Washington. With an appropriation of \$200,000 set aside for this purpose the council, composed of six leading national health bodies, will assist some American community of between 20,000 and 30,000 population and the surrounding county in securing as nearly as possible ideal conditions for the development of its children, from babyhood to adolescence, into sturdy, happy, useful citizens.

The first step will be the selection by a committee of experts, of the community in which the demonstration will be carried on over a period of five years. A number of Ohio cities are under consideration at this time, and among these Newark and Mansfield are making earnest efforts for selection. Geographical limitations are not imposed in the selection of the community, but it is believed the following qualifications will insure that the results are of greatest benefit to the entire country.

The town or city should be located in a county of between 50,000 and 60,000 population. The population should be fairly stable.

The age distribution of the population should be fairly near the average, especially as to the percentage of children and babies.

There should not be any strikingly predominant racial stocks.

The city or town should have a normal percentage of its population engaged in manufacturing.

There should be a variety of industries in the city.

The surrounding area should be agricultural territory.

The town should be in a birth registration state and should have fairly complete vital statistics.

The mortality of infants and children should not be strikingly abnormal. Health conditions should not be abnormally good or bad and health machinery, including state laws, local ordinances and personnel, should be equal to those of a community of similar size.

The committee which will recommend the town to be chosen for the experiment, consists of Dr. Richard A. Bolt, of Baltimore, (formerly of Cleveland), general director of the American Child Hygiene Association; Miss Ella Phillips Crandall, of New York, formerly director of the National Organization for Public Health Nursing; Dr. Charles J. Hatfield, New York, director National Tuberculosis Association, Owen R.

Lovejoy, New York, general director, National Child Labor Committee; Miss Sally Lucas Jean, of New York, director Child Health Organization; Dr. Haven Emerson, former health commissioner of New York, and Dr. Donald B. Armstrong, Framingham, Massachusetts.

The direction of this novel health experiment will be under Clarence King, who is widely known in the field of research and the administration of health and social work. He holds degrees from the University of Wisconsin and Columbia University.

Successful Meeting Ohio Branch A. C. S.

The career of the Ohio Section Clinical Congress American College of Surgeons opened auspiciously with the first annual meeting of the organization at the Hotel Statler, Cleveland, on April 1 and 2. The meeting was well attended by Ohio Fellows in addition to many visitors from throughout the country, indicating their approval of the plan of holding sectional clinical meetings in the various states. Following is a list of the Ohioans registered at the meeting:

Akron—Walter A. Hoyt, R. H. McKay, Carl R. Steinke, John H. Weber. *Alliance*—P. F. King. *Ashland*—W. M. McClellan. *Canton*—J. P. DeWitt, A. B. Walker. *Cincinnati*—J. H. Caldwell, J. Wilms, William Mithoefer, J. E. Pirrung, A. Ravogli, E. O. Smith, F. U. Swing. *Cleveland*—H. F. Biggar, Sr., A. H. Bill, M. E. Blahd, F. P. Corrigan, G. W. Grile, F. E. Cutler, John Dickenson, G. E. Follansbee, J. V. Gallagher, F. E. Herrick, C. A. Hamann, J. M. Ingersoll, W. E. Lower, Myron Metzenbaum, Frank Oakley, L. A. Pomeroy, H. G. Sloan, W. G. Stern, J. E., W. C., W. H. Tuckerman, J. M. Waugh, O. A. Weber, J. C. Wood.

Columbus—C. A. Burrett, L. L. Bigelow, Andre Crotti, C. S. Hamilton, Joseph Price, G. C. Schaeffer, Wells Teachnor, Frank Warner, A. C. Wolfe. *Dayton*—L. G. Bowers, Curtiss Ginn, E. R. Arn. *Dover*—D. W. Shumaker. *East Liverpool*—W. A. Hobb. *Gallipolis*—C. E. Holzer. *Kenton*—A. S. McKittrick. *Lima*—William Roush. *Mansfield*—J. L. Stevens. *Port Clinton*—H. J. Pool. *Portsmouth*—J. S. Rardin, J. W. Fitch, S. S. Halderman. *Sandusky*—Charles Graefe. *Springfield*—C. L. Minor. *Tiffin*—E. H. Porter.

Toledo—W. W. Brand, W. H. Fisher, S. D. Foster, John Gardiner, H. H. Heath, Frank Jacobi, John G. Keller, C. W. Moots, C. D. Selby, L. F. Smead, C. N. Smith, W. H. Snyder, G. M. Todd. *Warren*—D. E. Hoover, O. T. Manley. *Youngstown*—C. C. Booth, W. D. Coy, S. M. Hartzell, C. S. Hauser, W. E. Ranz, J. A. Sherbondy, J. L. Washburn. *Zanesville*—E. C. Brush, H. T. Sutton.



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ACADEMIES AND COUNTY SOCIETIES

Cleveland

(Lester Taylor, M. D., Secretary.)

The 169th regular meeting of the Academy of Medicine of Cleveland was held March 18. Dr. Reuben Peterson, professor of Obstetrics at the Medical School of the University of Michigan, was the guest of the evening. He spoke on "Experiences with Pneumoperitoneal X-ray as an Aid to More Accurate Pelvic Diagnosis." His paper dealt with the experiences of 150 cases of injections of carbon dioxide into the peritoneal cavity, either through the fallopian tubes or directly through the abdominal wall.

Dr. Peterson's talk was illustrated with lantern slides showing results in diagnosis not obtainable by other clinical methods of examination. He pointed out the necessity of proper technique in using carbon dioxide in preference to oxygen, having the patient in a position so that small quantities of the gas were sufficient, and discussed his findings in cases of pelvic tumor, obliterated tubes and early pregnancy. Dr. Peterson's work, representing the experience in a new field, was presented in a very happy and forceful manner. The discussion was opened by Dr. A. J. Skeel and further discussed by Drs. Weir, Fullerton, Bubis and Farnsworth. The discussion was closed by Dr. Peterson.

Present 85.

The 107th regular meeting of the experimental medicine section of the Academy of Medicine, was held at Lakeside Hospital, April 8. Program: 1. Demonstration of a Recording Blood Pressure Instrument of the Oscillometer Type, by Dr. M. A. Blankenhorn; 2. Blood Gas Analysis in Pneumonia, Dr. A. J. Beams; 3. An Explanation for Orthopnea in Cardiac Stasis, Dr. C. D. Christie; 4. The Effect of Homogenization

on the Antiscorbutic Value of Tomato Juice, Drs. H. J. Gerstenberger and W. M. Champion.

Columbus

(James A. Beer, M. D., Secretary.)

Program of March 28: Lobar Pneumonia: Etiology and Symptomatology, E. J. Gordon; Pathology, Jonathan Forman; Differential Diagnosis, Howard M. Brundage; Prognosis and Treatment, George M. Waters; Post Operative, S. J. Goodman; Surgery, J. W. Means.

Program of April 11: Modern Physical Education, B. E. Wiggins, supervisor physical education, Columbus public schools; Municipal Recreation, A. W. Raymond, director public recreation, Columbus; Physical Education Program at Ohio State, Dr. J. H. Nichols, Department Physical Education, Ohio State University.

SECOND DISTRICT

Greene County Medical Society met in the Elks' assembly room, Xenia, April 7, with 17 members present. The committee on revision of the fee bill, of which Dr. A. C. Messenger was chairman, recommended the following changes in the present schedule: Ordinary visits in town \$2 to \$3; ordinary visits out of town \$2.50 for the first mile and 50 cents for each additional mile and 50 per cent. to 100 per cent. increase for night visits. The committee also recommended a charge of \$25 to \$50 for an obstetric service in a case of natural delivery; \$35 to \$100 for instrumental delivery; \$5 to \$50 for primary perineorrhaphy; abortion \$25 to \$50; and \$2 for each hour of detention beyond five hours. Aside from these changes the committee recommended that the present fee bill stand as it is. The committee further recommended that the following appear on the fee schedule: "These fees to apply to all persons except for charity. Greene County Medical Society regards its fee bill as an essential part of its code of ethics and as binding as the other provisions of the code." The above mentioned recommendations were approved by a vote of the society and

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the committee was authorized to attend to the printing of the copies as altered.

Dr. A. B. Brower of Dayton was the visiting essayist and presented a paper on "Aortitis."

During the business session it was determined to include the delegate and alternate in the list of society officers enumerated in the constitution and by-laws.—C. H. Denser, Secretary.

THIRD DISTRICT

Logan County Medical Society's April 1st meeting was attended by 17 members. Following a luncheon, Dr. W. W. Hamer read an instructive paper on "Acute Surgical Abdomen," especially emphasizing the danger of the indiscriminate use of purges in cases with abdominal pain. Dr. J. P. Harbert reported a case of melanotic sarcoma of the eye, with the gross and microscopic specimens of same.—M. L. Pratt, Secretary.

FOURTH DISTRICT

Henry County Medical Society adopted the following resolution on April 1:

Resolved, that the Henry County Medical Society is opposed to the use of nurses in the State of Ohio as anesthetists.

Resolved, that suitable legislation be presented in the present session of the legislature to repeal the present act authorizing nurses to act as anesthetists under the direction of the surgeon, since such action cannot be safely carried out during even trivial operations.

Resolved, that the delegates and councilors of this district are hereby instructed by the Henry County Medical Society to vote against any proposal of the State Society to stand neutral or favor any action by the State Society favorable to nurse anesthetists.

Resolved, that the secretary of this Medical Society be instructed to forward a copy of these resolutions to the president of the Ohio State Medical Association, to the editor of the Ohio State Medical Journal and to the State senator and representative from this district.

Sandusky County Medical Society held its third regular meeting of the year on March 24 at the home of Dr. W. H. Booth, Fremont. Twenty members and two guests, Drs. H. L. Wenner, Jr. and E. G. Galbraith of Toledo, were present. After the wants of the inner man had been amply satisfied by a sumptuous chicken dinner, the party repaired to the parlor for an intellectual feast. Dr. Wenner's paper on "Empyema" was a masterly production and loudly applauded by the members. Dr. Wenner is to be congratulated on having had the opportunity of working with the commission appointed by the Surgeon General to investigate the appalling death rate from this disease. He advocated the Carrel-Dakin treatment after section in all acute cases. Chronic cases must be submitted to the most careful scrutiny, including clinical and laboratory findings, before an attempt is made to relieve them. Post-operative treatment includes a high caloric diet. Drs. E. W. and E. A. Baker led the general discussion that followed. The members were in a fighting frame of mind and

freely lambasted the essayist, but he came back strong, winning hearty words of commendation. Dr. Galbraith cited, under clinical cases, a case of occluded mastoiditis with suppuration and even peri-sinus involvement. Recovery followed drainage. A short chain streptococcus had been isolated from the blood. Dr. Ickes reported a case of severe inguinal pain becoming lumbar with pyuria that cleared up following tonsillectomy.

Dr. Ickes, the legislative committeeman, reported on the progress of medical and public health legislation before the General Assembly. Members were reminded of the coming annual meeting of the State Association and urged to attend. A number of our members were guests of the Seneca County Medical Society in Tiffin, April 21, and enjoyed an illustrated lecture on "Local Anesthesia," by Dr. J. L. DeCourcy of Cincinnati.—C. I. Kuntz, Secretary.

FIFTH DISTRICT

Ashtabula County Medical Society met for 143rd regular meeting, March 8, at Hotel Ashtabula, with President R. B. Wynkoop in the chair. Captain E. O. Whitney, president of the County Public Health League, briefly outlined the policies of the organization and solicited the co-operation of the members of the Medical Society. The membership applications of Drs. F. C. Coombs of Ashtabula and N. Osborne of Andover were presented. In response to a communication from the Ohio Public Health Association, advising the society that it had been voted a constituent member and requesting the appointment of a director on the board of directors, Dr. R. B. Wynkoop was selected to represent the society. A resolution against nurses being allowed to give anesthetics, similar to those included in the Henry County Society report, was read and by motion was adopted. Motion was passed assessing each member five dollars, to be used for emergency purposes at discretion of the officers. "Treatment of Gonorrhea and Its Sequelae" was the subject of scientific discussion in which every member participated and seemed well qualified to talk.—J. J. Hogan, Secretary.

Lake County Medical Society met in regular monthly session at the Painesville Y. M. C. A., April 4. Dr. J. V. Winans of Madison, was appointed delegate to the State Medical Association, and Dr. W. Montgomery of Mentor, alternate. Dr. W. E. Lower of Cleveland then addressed the society on "The Treatment and Care of Patients with Prostatic Obstruction." In naming the causes, he spoke of tuberculosis of the prostate; growths as carcinoma, fibroma, malignant conditions; and lastly, the most common cause of obstruction, adenoma. The last part of the address was illustrated by moving films, showing the surgeon at work, step by step, giving in

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detail the technique of the prostatectomy.—E. S. Jones, Secretary.

Mahoning County Medical Society's first clinic day, held in Youngstown, March 19, was an unqualified success. The clinicians were six members of the faculty of the University of Michigan Medical College: Dr. Hugh Cabot, surgery; Dr. Reuben Peterson, obstetrics and gynecology; Dr. L. F. Newburgh, internal medicine; Dr. R. P. Canfield, oto-laryngology; Dr. Udo J. Wile, dermatology, and Dr. Van Zwailunwenburg, roentgenology. At the close of the day's program the society held its annual banquet, with the visiting clinicians as special guests.

Stark County Medical Society at its meeting of March 15, adopted the resolutions opposing administration of anesthetics by nurses submitted by the executive secretary of the National Anesthesia Research Society. The resolutions are similar to those found in the report of Henry County Society on page 350. At this meeting the society had as its guest Dr. W. H. Cameron of Pittsburgh, who gave an excellent address on "Radium."

Summit County Medical Society met, April 25, with an attendance of 72 members from Akron, Barberton, Cuyahoga Falls and Kenmore. Nine physicians were admitted to membership and two new applications presented. The program included: 1. "Spasmophilia Diathesis," R. S. Friedley; discussion by J. G. Kramer, D. F. Mathias, R. G. Pearce, and J. M. Ulrich. 2. "Pyloric Spasm and Stenosis in Infancy," with illustrations, J. M. Ulrich; discussion, H. W. Hogue, W. A. Hoyt, R. S. Friedley, S. St. J. Wright, D. H. Morgan and J. D. Smith. 3. Exhibition of new milk bottle protector, Mr. W. H. Abrogast, Barberton. 4. Exhibition of X-ray photos of arteriosclerosis, S. St. J. Wright. 5. Report of "Vagitis Uterina," or crying of infant before birth, A. G. Gould. The society unanimously adopted the following resolution which is approved by the entire membership:

Resolved, that the Summit County Medical Society is opposed to the use of nurses as anesthetists in the State of Ohio.

Resolved, that this society is in favor of legislation being introduced in the legislature of the State of Ohio to repeal the present act which authorizes nurses to act as anesthetists.—A. S. McCormick, Secretary.

Wayne County Medical Society held its March meeting in Orrville on the 8th. The program was devoted to a symposium on "Pseudo Membranous Pharyngitis" which included a number of interesting papers and a thorough general discussion. The society adopted a resolution to be sent to President Harding, indorsing Dr. John G. Wishard, an active member of the Wayne County Society and president of the Sixth Council District Society, for the position of ambassador to Persia. Dr. Wishard was a resident of Persia for 20 years before locating in Wooster.—F. B. Snyder, Secretary.

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SEVENTH DISTRICT

Tuscarawas County Medical Society and the County Dental Society held a joint meeting in the New Philadelphia Chamber of Commerce, March 10, which was unanimously declared by both professions to have been a very profitable and enjoyable occasion. After the banquet Dr. Frank M. Pursell of Akron read a paper on "Oral Prophylaxis and Its Relation to Systemic Diseases," which was discussed by both physicians and dentists. In a business session the medical society discussed legislative measures, including the reorganization bill, the nurse anesthesia bill and House Bills Nos. 130 and 131. The society adopted a resolution declaring it could not give a recommendation for reciprocity to a physician who had practiced in the county but had never been a member of the society, and instructing the president and secretary not to indorse the application for the society.

The program for the meeting of April 14 was featured by papers on "Anaphylaxis," with animal demonstration, by Dr. Max Shawecker; "Veratrim," by Dr. S. M. France, and a case report by Dr. G. T. Haverfield.—P. J. Alspaugh, Secretary.

EIGHTH DISTRICT

Athens County Medical Society, in regular monthly session at Athens, April 5, heard an address by Dr. Giles DeCourcy of Cincinnati on "Local Anesthesia." The speaker believes that local anesthesia should be used in the majority of minor operations, and that it is the method par excellence in herniotomy, thyroidectomy and operations of that class. The technique of each operation was clearly demonstrated with motion pictures. Dr. DeCourcy's preference of an agent is cocaine, which he finds practically harmless in proper strength. Before the scientific session an excellent dinner was served the 30 members by Drs. Copeland and Howe, in whose offices the meeting was held. Dr. C. S. McDougall suggested that in appreciation of the excellent support given medical legislation, a vote of thanks be extended to Senators LeFever and Archer and Representative Hatch and also our neighbor, Senator Jones. The May meeting will be held at Nelsonville.—H. M. Taylor.

Licking County Medical Society, in session February 24, adopted resolutions opposing nurse anesthesia similar to those contained in the Henry County Society report on page 350.

Washington County Medical Society on March 9 adopted resolutions on the subject of nurse anesthesia similar to the one published in the report of Henry County Medical Society on page 350.—A. G. Sturgiss, Secretary.

DEATHS IN OHIO

Bernard Blain Buell, M. D., Cleveland College of Physicians and Surgeons, 1909; aged 38; member of the Ohio State Medical Association; died March 14, of injuries received when his automobile was struck by a passenger train near Brownhelm Station, where he had been calling on patients. Dr. Buell's home was in Vermilion. He leaves a widow and three children.

Andrew J. Crane, M. D., Cleveland Homeopathic College, 1877; aged 73; died at his home in Kenton, March 17, from chronic nephritis. Dr. Crane entered practice in Cleveland and later practiced in Mt. Victory, Kenton, the States of Colorado and California, returning to Kenton in 1912 and continuing to a few weeks before his death. His wife and two brothers survive.

Henry Warren Hawley, M. D., Pulte Medical College, Cincinnati, 1880; aged 67; died at his home in Cincinnati, March 8, from cerebral hemorrhage.

Jost Durst Kramer, M. D., University of Philadelphia, Pennsylvania, 1902; aged 41; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Dayton, March 16, from diabetes. Dr. Kramer spent the year following his graduation from college in study in Vienna and since then has practiced in Dayton. Surviving are his wife, mother and three brothers.

Edward Leroy Leonard, M. D., Starling Medical College, Columbus, 1892; aged 57; member of the Ohio State Medical Association; died at his home in Fulton, March 7, from heart disease. During the war Dr. Leonard served with the rank of captain in the Medical Corps of the Army at Camps Greenleaf and Grant. He is survived by his wife, one daughter and two sons.

Charles Francis Park, M. D., Cleveland University of Medicine and Surgery, 1873; aged 74; died at his home in Grafton, March 20. Dr. Park had been a resident of Grafton for many years. He leaves his wife, one daughter and one son, Dr. W. C. Park, also of Grafton.

George Taylor Row, M. D., University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1877; aged 75; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Circleville, March 7, from broncho-pneumonia. Dr. Row located for practice in Circleville immediately after his graduation and spent his entire professional career there, retiring last October. His widow and two daughters survive.

Wilson D. Walker, M. D., Pulte Medical College, Cincinnati, 1895; aged 52; died at his home in Kelloggsville, Ashtabula County, March 16. Dr. Walker had practiced medicine in Kelloggsville for 22 years. He leaves his wife, mother and one daughter.

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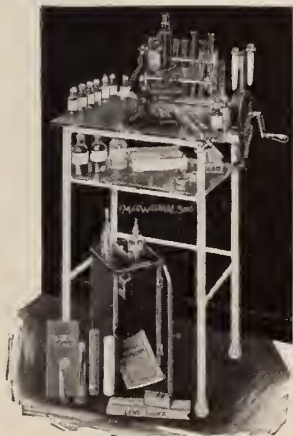
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Sleeping Sickness Deaths Increase— Disease Made Reportable

Among mortality statistics prepared by the State Bureau of Vital Statistics for the year 1920 and just made public, none are of greater interest than the data on sleeping sickness because of the epidemic proportions which this disease has reached here as in other parts of the country. The exact mortality rate from this cause is difficult to establish because of the different clinical aspects of the disease, the difficulties in diagnosing it, and the different forms, abortive, light and ambulatory. However, it is anticipated that much more complete reports on this disease will be available in the future, due to a recent ruling of the Ohio Public Health Council making sleeping sickness a reportable disease.

A total of 120 deaths from this cause were reported to the Bureau of Vital Statistics during the year 1920, compared to 28 reported during the previous year. Sixty-two of the deaths in 1920 were males and 58 were females; 116 were white and 4 were negroes; 67 were reported as single, 45 married, and 4 widowed.

During 1920 the number of deaths increased steadily each month until March, when it took a downward trend which continued until October. At this juncture an increase began which reached its crest in January of the present year, when the number of deaths exceeded those in any preceding month by ten. There were 4 deaths in January, 1920; 20 in February; 29 in March; 24 in April; 14 in May; 7 in June; 6 in July; 1 in August; 6 in September; 1 in October; 2 in November, and 6 in December. There were 39 deaths reported from sleeping sickness for the month of January, 1921.

Sleeping sickness shows no respect for age, for in every age period from one to 84 years there were deaths recorded from this cause. However, the greatest number of deaths in any age period occurred from 35-39 in which there were 15; the next in order was the period from 25-29, with 14 deaths. Eleven of the deaths were over 60 years of age, and at this age the females predominated, there being two males and nine females. Twenty-six of the sleeping sickness deaths in 1920 were under 15 years of age and had no occupation. The others show 30 different occupations, with 10 farmers predominating.

Data collected by the state bureau for the month of January, 1921, show an encouraging reduction in the total death rate from all causes. There were 3,237 deaths reported from the cities and 2,923 from the rural districts for January, representing a total of 6,160 against 6,864 for January, 1920. These included one death from anthrax, reported from Licking County, and one from pellagra, from Cincinnati.

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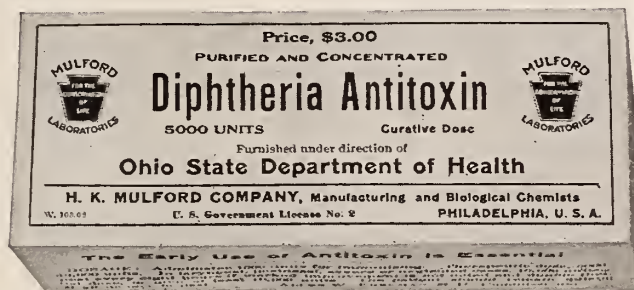


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5000 units	- - - - -	3.00
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This Antitoxin is furnished at above prices to all physicians, for general practice as well as for local Boards of Health, hospitals and other institutions.

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The regular licensing examinations of the State Medical Board will be held in Columbus on May 31 and June 1, 2 and 3.

The nurse registration examinations will be held at Memorial Hall, Columbus, on June 9, 10 and 11.

H. W. McFarren, Bowling Green, pleaded guilty to charges of illegal medical practice on March 30 and was fined \$25 each plus the cost, in all amounting to \$130. For some time past he had been treating divers diseases and prescribing "McFarren's Remedies."

Reciprocity Certificates

At the meeting of the State Medical Board held on April 5, reciprocity licenses were issued to the following physicians:

Erwin Carter Brandon, Portsmouth; graduate of Vanderbilt University Medical Department, 1910; intended residence, *Portsmouth*.

John Wilkinson Cogswell, College of Homeopathic Medicine, Ohio State University; graduate Iowa State Homeopathic College, 1906; intended residence, *Columbus*.

James John Conlon, Children's Hospital, Akron; graduate University of Michigan, 1915; intended residence, *Akron*.

John Stephen Cronin, Cleveland; graduate Georgetown University, 1917; intended residence, *Cleveland*.

Estes Jeffres Gunn (colored), Danville, Virginia; graduate Meharry Medical College, 1919; intended residence, *Akron*.

Harold Leonard Higgins, University of Cincinnati College of Medicine; graduate Johns Hopkins University, 1919; intended residence, *Cincinnati*.

Charles Maxwell Hinds (colored), Annapolis, Maryland; graduate Meharry Medical College, 1918; intended residence, *Akron*.

Cyril Christopher Hussey, Sidney; graduate Johns Hopkins University, 1918; intended residence, *Sidney*.

William Rennie McKinnon, Paulding; graduate University of Michigan, 1918; intended residence, *Paulding*.

Lyle Dee McMillan, Bellaire, Michigan; graduate University of Michigan, 1916; intended residence, *Oberlin*.

John H. McMorries (colored), Muncie, Indiana; graduate Howard Medical College, 1915; intended residence, *Toledo*.

Francis Joseph Mahony, Cleveland; graduate

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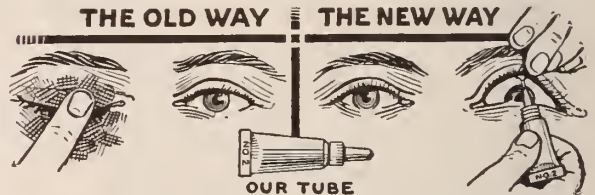
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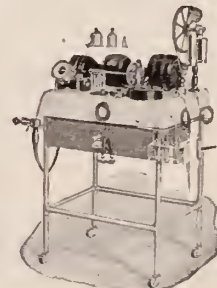
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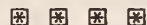
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Charles Leander Mellon (colored), Terrell, Texas; graduate Howard University, 1908; intended residence, Toledo.

Jefferson Hernando Minor, Lakewood; graduate University of Maryland, 1903; intended residence, Cleveland.

George Francis Patterson, Cincinnati General Hospital; graduate Iowa State University, 1919; intended residence, Cincinnati.

Louis Lieber Rosenberg, Toledo; graduate University of Michigan, 1920; intended residence, Toledo.

Fred John Schuster, Cleveland; graduate University of Michigan, 1920; intended residence, Cleveland.

Alva Adrian Shadday, Harveysburg; graduate University of Louisville, 1917; intended residence, Harveysburg.

Clifford Addison Smith, Sistersville, West Virginia; graduate Baltimore Medical College, 1909; intended residence, Clarington.

Marion Hope Stevenson, Akron; graduate University of Michigan, 1920; intended residence, Akron.

Oscar Mitchell Unger, Monroe, Michigan; graduate University of Michigan, 1915; intended residence, Toledo.

John B. H. Waring, Port William; graduate George Washington University, 1907; intended residence, Port William.

Fred Cecil Watson, Bocos del Toro, Panama; graduate University of Michigan, 1915; intended residence, Akron.

Robert Thomas Wise (colored), Temple, Texas; graduate Meharry Medical College, 1918; intended residence, Canton.

Carl Jay Yeisley, Toledo; graduate University of Michigan, 1920; intended residence, Port Clinton.

Henry Frank Bean, Portsmouth; graduate Louisville University, 1876; intended residence, Portsmouth.

John J. Hanmore, Waynesfield; graduate Kentucky School of Medicine, 1884; intended residence, Waynesfield.

AGAINST NURSE ANESTHETISTS

The secretary of the Canton Medical Society an independent local organization, not a component part of the Ohio State Medical Association, announces that his society has adopted resolutions in opposition to the administration of anesthetics by nurses. The resolutions are similar to a number printed in previous issues of *The Journal* and to that appearing on page 350 of this issue.

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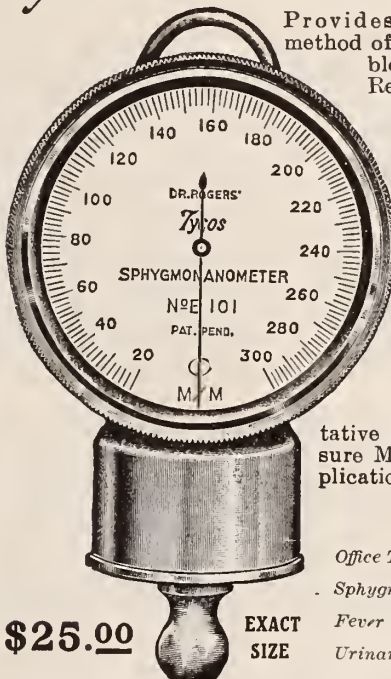
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EVANSVILLE INDIANA, U.S.A.

Hospital Inadequacy Menaces Health of Rural Counties, Says the Report of Official Survey

The State Department of Health has submitted to the General Assembly the report of a hospital survey of the state, undertaken by direction of the Talley resolution for this purpose adopted at the previous session of the legislature as a direct result of the influenza epidemic.

The report lists 238 "acute hospitals," distinguished from 44 state institutions and other specialized hospitals which do not contribute to the public hospital facilities of the state. The so-called acute hospitals have 13,645 beds, or 2.3 to each thousand of population. They treated 223,000 patients at a total cost of \$15,000,000 in 1919.

Rural counties were found to be deficient in hospitals, the counties with the majority of their people living outside cities of 25,000 or more population having less than one bed per 1,000 people, while those of more urban population have 3.2 beds per 1,000. Twenty-nine counties with a population exceeding 700,000 were without acute hospitals at the close of 1920, the date for which the figures were compiled. Marion is the only urban county in this group and it has registered a hospital since the opening of the present calendar year.

Hamilton county leads the state in the number of hospital beds per thousand population, this

ratio being 5.7. Franklin county is second with 4.6.

The state is reported to have three hospitals with more than 500 beds each, nine between 250 and 500 and 24 between 100 and 250. Although these institutions over 100 in capacity represent only 15 per cent. of the hospitals of the state, they have 61 per cent. of all hospital beds. While one-half of the hospitals have under 25 beds each, they have only 10 per cent. of the total bed capacity.

Hospitals supported by public taxation make up 17.8 per cent. of the bed capacity, charitable hospitals operated for the benefit of the public 70.5 per cent. and so-called "proprietary hospitals," operated for a direct or indirect profit to their owners, 11.7 per cent.

Basing its suggestion on the hospital shortage found in the rural counties, the report recommends a campaign of education to bring such counties to a realization of the importance of hospital service as a protection to the public health. Such educational work, it is declared, must be the first step in any movement to extend hospital facilities in these counties.

The need for state supervision of hospitals, it is urged, arises from the fact that no legal

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A granulated casein, a compound food, a concentrated form of nourishment. The content of one box of Aprotein is the pure albumen of 34 pints of milk. Aprotein is a foremost tissue builder, replacing tissue elements which have been destroyed through illness or otherwise. Effective in the treatment of every convalescent, before and after operation, for the nursing mother, for malnutrition, for lack of vitality, for infants' and children's feeding, for nutritional disorders, for diarrhoea, tuberculosis and all wasting diseases.

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standards of records, personal qualifications or service to govern the operation of a hospital and protect the patient against improper methods of care now exist. Extension to all hospitals of the system of state licensing now in effect with regard to maternity hospitals only is recommended. Such a system, it is further recommended, should be made self-supporting by requiring payment of license fees. A law making approval of the State Department of Health a prerequisite to the incorporation of a hospital is also urged.

Amendment of present tuberculosis hospital laws to permit establishment of a county sanatorium by a county with more than 50,000 population is recommended. A bill to this end has been introduced in the legislature.

Small Advertisements of Interest

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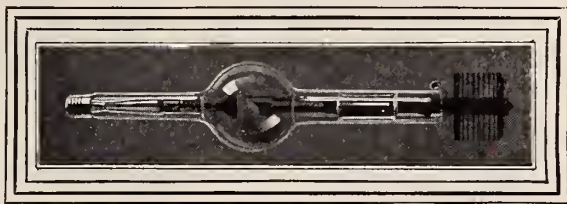
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NEWS NOTES OF OHIO

Orrville—Dr. F. B. Snyder, a practitioner of this city and secretary of the Wayne County Medical Society, has moved to Ashland.

Cleveland—Dr. Francis P. Corrigan, who became visiting surgeon to St. Alexis Hospital early this year, has returned from a trip to South America, where he visited Chili, Peru, Bolivia and Paraguay in the interest of the American College of Surgeons. He was accompanied by Mrs. Corrigan.

Toledo—Dr. P. M. Johnson, colored physician, was recently acquitted in federal court on three charges of violating the Harrison narcotic act. He was convicted on a fourth charge of conspiracy to violate the law.

Newark—Dr. Harry P. Martin sustained serious injuries, including a fracture at the base of the brain and a broken collar bone, when he was struck by an automobile, April 1.

Canton—Among local physicians who have spent the winter in Florida are Drs. H. M. Schuffell, C. A. Crane and J. F. Kahler. Dr. A. B. Walker recently returned to Baltimore.

Springfield—Dr. Carl Meloy, 38, a former resident of this city, died at his home in Detroit, March 29. He graduated from Johns Hopkins, served at one time on the faculty of the University of Virginia, and at the time of his death was pathologist at Grace Hospital, Detroit.

Cortland—In Dr. Martin S. Mayhew, 83, this village claims one of the oldest medical practitioners of the state. He graduated from the University of Michigan in 1865 and has practiced here since 1880.

Quaker City—Dr. A. I. Dorr, a former resident of Temperanceville, has opened offices in this village.

East Liverpool—Dr. W. N. Bailey has recovered from slight injuries received when he was assaulted by footpads as he was placing his car in the garage at the rear of his home, recently.

Cleveland—Dr. Hamilton Fisk Biggar has returned home from a visit at the Casements, the winter home of Mr. John D. Rockefeller at Ormond Beach, Florida. Dr. Biggar is 82 years of age and has been in active practice in this city for 55 years.

Fremont—Dr. and Mrs. C. I. Kuntz announce the birth of a daughter, Mary Alice, on March 5.

Cincinnati—Memorial services for the late Dr. Joseph Ransohoff were held by the Cincinnati Academy of Medicine, April 4.

Cleveland—Dr. and Mrs. J. M. Moore have returned from Florida.

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Upon request, we will send physicians condensed literature and specimens of benzyl benzoate preparations with our compliments.

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The chemically pure, physiologically active constituent of the thyroid gland, introduced by Kendall and made by E. R. SQUIBB & SONS under license of the University of Minnesota. Possesses all the activity of desiccated thyroid and offers the advantage of accuracy in dosage and therapeutic effect. Marketed in tablets of 1/320, 1/160, 1/80, and 1/32 grain each for administration by mouth. Crystalline Thyroxin for intravenous use is supplied in vials of 10 milligrammes to 100 milligrammes.

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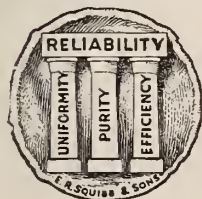
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Suprarenalin designates the astringent, hemostatic and pressor principle of the Suprarenal Gland as isolated by the Armour chemists.

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EDITORIAL COMMENT

by D. K. M.

A Memorable Anniversary

The seventy-fifth annual meeting of the Ohio State Medical Association, held in Columbus last month, May 3, 4, and 5, marked in an impressive manner, the advances in medical science and the progress in medical organization in Ohio.

From the standpoint of attendance, in the excellency of the scientific programs and from the interest in the entertainment features, this meeting established a record and at the same time indicated greater possibilities for the future by coordination of professional effort through the medium of the State Association.

The total registration of physicians (members and guests) in attendance exceeded 1,300, surpassing by over 100 the highest previous record established in 1919, and exceeding by several hundred the average attendance at the annual conferences during the past decade.

The excellency and attractiveness of the scientific programs of the various section meetings were supplemented and greatly enhanced by the general sessions. The annual orations at the general session on the second afternoon of the meeting were received with much appreciation and the presence of Dr. Henry Smith, Lieutenant-Colonel in the British Army, as the guest of the Eye, Ear, Nose and Throat Section, was an important drawing card, one or more guests being

present from each of 21 other states. The intellectual treat provided at the annual banquet, and the special luncheon meetings, and the strictly diverting features of the annual smoker will long be remembered with pleasure by those in attendance.

The scientific and commercial exhibits were also a center of interest. Withal, the committee on arrangements, headed by Dr. Sylvester J. Goodman, councilor of the Tenth District, received well merited appreciation for their efforts.

The general success of the meeting also may be considered a tribute to the leadership of the retiring president, Dr. Charles Lukens, of Toledo, and the incoming president, Dr. Wells Teachnor, of Columbus, whose activities during many years in the interest of organized medicine, are widely recognized and appreciated. The harmonious spirit was further attested in the selection of Dr. Robert Carothers of Cincinnati, as president-elect, and the selection of his home city as the meeting place for next year's session.

Those who were fortunate enough to be present returned home pleased and gratified, according to their own expression. Those members who found it impossible to attend may feel proud in the accomplishments through organization activities of the profession which has established for itself the honored and honorable place in Ohio and in the nation at the present time.

Supreme Court Deals Blow to Quackery

A final adjudication of the question raised as to the constitutionality of the medical practice laws in Ohio and the rules and regulations of the Ohio State Medical Board is covered in a comprehensive decision written by Judge R. M. Wanamaker, and concurred in by the other six members of the Supreme Court.

It will be remembered that some months ago the unlicensed chiropractors of Ohio organized to obstruct the application of the Ohio laws, secured a temporary injunction against the State Medical Board and application of the Ohio statutes. The Court of Appeals of the Eighth District in a forceful opinion unanimously concurred in by Judges Dunlap, Washburn and Vickery, and which was reproduced in this *Journal*, upheld the constitutionality and fairness of the Ohio laws as well as the reasonableness and the proper general application of the regulations of the Ohio State Medical Board.

The recent decision of the Supreme Court sustained the Court of Appeals and set forth a number of general principles in which the entire medical profession is much interested. This forceful and constructive opinion is extensively quoted in an article appearing on page 425 of this issue.

In connection with the action of the Supreme Court, it is of interest to know that the unlicensed chiropractors of Ohio have made a most desperate effort during the past session of the legisla-

ture to secure special privileges through the enactment of a law to establish a separate chiropractic board. The first effort in the early part of the session was made on an initiated petition, known as House Bill No. 13. This bill after pending several weeks in the legislature, was indefinitely postponed on a vote of the House of Representatives. Later, a similar bill was introduced in the Senate by Senator Endly (Senate Bill No. 185), and almost an identical measure more recently was introduced in the House of Representatives by the chiropractic member, known as House Bill No. 399. Through superficially plausible but obviously misleading propaganda, considerable support was secured for each of these vicious measures. Needless to say the enactment of any such proposal would practically destroy the laws of Ohio which now protect the public from charlatans and incompetents. The present laws are fair and adequate, in addition to being extremely reasonable so that any practitioners of the limited branches can be admitted to practice if they have even the most reasonable qualifications.

The whole history of this particular cult is based on mercenary motives and extravagant advertising. Innumerable cases can be cited where chiropractors either unlicensed or practicing in violation of the law, have failed to recognize contagious and communicable diseases, and where they have been guilty in aiding in the spread of contagion where they have attempted to treat diphtheria, smallpox, typhoid, tuberculosis and other serious diseases without even recognizing their existence.

The time has come when the practitioners of this cult should be made to understand that if they expect to practice in Ohio that they must comply with the present standards which at best are none too exacting.

A True Keynote

A more general dissemination of scientific truths in the protection and promotion of public health was advocated by the retiring president in his annual address during the state meeting. He pointed out that the medical profession through the centuries has maintained a Socratic indifference of the world's opinion and has buried itself in the problems which it must solve; that it has shunned publicity and left the world which is ever eager to know about its health and life unsatisfied, with the result that the thirst for knowledge for its selfish preservation is satisfied by the quacks and the cults who seek the lime-light for selfish purpose.

This address which reflects much thought, and which merits the thorough consideration of the profession, is published on page 409 of this issue.

On being installed as president, Dr. Wells Teachnor complimented the members of the profession for their interest in their respective local

societies which form the basis and measure the success of the State Association. He stated that

"Through a gradually increased membership and through harmonious cooperation the medical organization in Ohio occupies an enviable position. We have established a number of important precedents and have set examples for professional organizations elsewhere. What has been accomplished in the past, as recounted in the annual reports of the Committee on Public Policy and Legislation and the other important activities, is but an example of still greater possibilities through concerted action in an organization such as ours."

"It is quite proper at this point to emphasize my convictions—that no organization, and particularly an organization such as ours, can succeed and be effective unless the program of activities as determined and promoted by the officers, the council, the standing committees and the various departments, represents the sentiment of the entire profession.

"The State Association from time to time must enlarge its field of activity in rendering service and extending benefits to its members. As the time approaches when all eligible physicians have realized the importance and necessity of being affiliated with organized medicine, greater cooperation must be developed with the American Medical Association, the American College of Surgeons, and other national professional groups, and especially with all worthy allied, civic, social and welfare organizations, which are interested in some of our common purposes. The idea of cooperation has been developed to a great extent in our association at the present time, but our contacts must be increased.

"Ever realizing the responsibilities which rest on our profession, we must take the leadership and point the way in public and political activities toward the safeguard of health, the elimination of disease and the prolongation of life. If our profession is to retain the respect which it deserves its attitude in all these matters must be unselfish."

Medical Publicity

The theme of the annual address delivered by the retiring president, Dr. Lukens, emphasizes the great need of a better education of the public in regard to the principles of medical service, the need for high standards in medical training; in thorough hospital facilities and strict enforcement of the requirements in licensure. Numerous suggestions have been made from time to time on the means through which this plan should be inaugurated.

It seems apparent that in order to gain the approval and proper support of the public and better trained physicians, it is essential that the public thoroughly understand the reason and purpose of such improvement. In times of epidemic, the public is quick to recognize the superior medical knowledge that the occasion demands, and

follows in absolute faith the preventive measures that are prescribed. However, when the individual is ill with a non-contagious disorder, he is often much more susceptible to advice from the cultist or healer who boasts his cures from the housetops than to the carefully trained physician who prefers that his work and place in the community serve as a criterion of his ability.

Obviously, medical publicity must be developed along fundamental and systematic lines and it would appear that this can best be accomplished by making it a part of the general education of every boy and girl during the grade and high school courses, supplemented by lectures and lantern demonstrations presented in a pleasing and attractive manner, for it is only when the achievements in medicine and surgery become a part of the general knowledge of every citizen that there will be a proper appreciation of the need of high requirements in medical education and practice.

Progressive steps have already been taken in this fundamental matter. War service with its attendant problems emphasized and brought forth a most constructive educational program in health matters. The United States Public Health Service is to be complimented for its educational efforts. Excellent newspaper publicity supplementing lectures and other educational means, has appeared from time to time in the public press. Through the guidance and advice of the medical profession; through the constructive activity of health organizations, a consecutive and well-planned educational program is being instituted in many of the schools. This is further supplemented by the program of activity outlined by the Ohio Public Health Association and other worthy agencies. As an attractive example, health pageants are being arranged and produced in various communities in Ohio under the auspices of that association, in which, by means of pageantry and allegory, the simpler health truths are emphasized and so illustrated that they make a lasting impression on the minds of the boys and girls, especially.

Indeed, publicity of various kinds is a most important step in educational programs, and constructive, truthful publicity is the only means of overcoming fraudulent, misleading advertising which has been defined as the life blood of quackery. In fact, quackery has almost become the death blow of advertising, but through the constructive efforts of the American Medical Association, in cooperation with the Associated Advertising Clubs of the World, and local better business organizations, the blatancy and bombast of quackery and nostrum advertising is steadily diminishing.

The medical profession not only has an important function, but a responsibility in advising, guiding and molding these various educational efforts of which publicity of an impartial sort may properly serve an important part.

Legislation

Since the last review of the legislative activities of the Eighty-Fourth General Assembly, among those measures enacted by both houses and signed by the Governor are:

The Chatfield bill (Senate Bill No. 57) which corrects the defect in the present law relative to physicians serving in lunacy cases in probate court. This enactment provides for the remuneration to physicians designated for service in lunacy proceedings whether or not the patient is committed to an institution, in addition to regular witness fees.

The Wenner Bill (Substitute House Bill No. 47), known as the occupational disease compensation act, authorized the State Industrial Committee, after July 1, 1921, to fix the premium rates for all occupations and industries as based upon the pay rolls of each industry so as to provide an adequate fund for compensating occupational diseases for which benefits are included under the workmen's compensation act. The special fund provided by premium rates assessed on industry shall be maintained until July, 1924, when the occupations are to be classified according to disease hazards and a premium established that will maintain the occupational disease fund from year to year. A penalty is provided for Ohio physicians treating patients believed to be suffering from occupational diseases who fail to notify the Industrial Committee of the fact within 48 hours.

Any of the following diseases contracted by an employee within twelve months previous to date of disablement and due to the nature of any of the processes described by the bill, are listed as occupational diseases: Anthrax, glanders, lead, mercury, phosphorus arsenic, benzo^l. gasoline, carbon bisulphide, wood alcohol poisoning, infection of or inflammation of skin, epithelioma, cancer, etc., compressed air illness, carbon dioxide poisoning, brass and zinc poisoning.

This bill was signed by the Governor on May 5, and will become effective within ninety days, or the early part of August. The Industrial Commission has not yet worked out plans for the application of this law, and a complete analysis of the procedure and the requirements placed on physicians in reporting occupational diseases and applying for compensation for medical service, will be made through the columns of *The Journal* prior to the time the law becomes effective.

The Fouts Bill (House Bill 325), provides for a special state tax of three-eighths of a mill for a period of two years in the creation of a building fund for the benevolent and correctional institutions and the three state universities, two-eighths of a mill will go to the benevolent and correctional institutions, and the remainder to the universities.

Three-fourths of the proceeds, amounting to \$3,750.00, will be available during the biennium

1921-1923 for additions and betterments to all institutions under the department of welfare. Such a portion of this fund, as determined by the director of the department and the controlling board, may be applied toward additional accommodations for the feeble-minded.

The proceeds from the one-eighth mill levy are to be divided among the universities as follows: 72 per cent. to Ohio State; 14 per cent. to Ohio, and 14 per cent. to Miami. This bill will provide more adequate teaching and building facilities, including a hospital for the medical college of Ohio State University, and should be a step forward in the expansion of medical education as a state function at the Ohio State University.

The Burke Bill (Senate Bill No. 174) enlarges the definition of "dependent child" by providing that "any child under eighteen years of age who is dependent upon the public for support or who is destitute, homeless or abandoned, or without proper parental care" may be placed under the guidance of the state for care, treatment and education. In effect, the bill extends the benefits of medical and surgical treatment to indigent or dependent crippled children who are not now properly cared for. The enforcement of this measure is under the direction of the Board of State Charities, which is empowered to arrange for the treatment and education of crippled children committed to it by the Juvenile court.

The Wendt Bill (House Bill No. 200) provides for the education of crippled children in addition to such benefits already extended to the blind and deaf, and provides the methods whereby local authorities under the direction of the superintendent of public instruction may provide for proper schooling, and makes available not to exceed \$300 per year for such deaf, blind or crippled pupil given instruction in special classes.

The Bing Bill (Substitute House Bill No. 218) provides for state cooperation with the federal government in carrying out the provisions relative to the promotion of vocational rehabilitation of persons disabled in industry. The State Board of Education, together with the State Industrial Commission is empowered to cooperate with the federal government in securing the benefits of the vocational rehabilitation act.

The Talley-Chatfield Bill (House Bill No. 256) the combined act of duplicate Senate and House measures, provides for more adequate state supervisory control over public water supplies, and empowers the State Department of Health to require improvement of unsatisfactory water supply and water works systems. This enactment is in the nature of a preventive measure intended to correct such conditions as that which caused the Salem typhoid epidemic.

Nothing very definite can be said at this time on the application of the provisions contemplated in the administrative reorganization code (House Bill No. 249) which has previously been analyzed as it applies to the State Department of Health, Department of Public Welfare and the licensing boards. It may be well to repeat again, a brief

analysis of these departments: In the State Department of Health will be placed the Bureau of Vital Statistics and the State Plumbing Inspection, with a proper continuance of the divisions on administration, hygiene, communicable diseases, sanitary engineering, laboratories and industrial hygiene, child welfare, and others.

In the Department of Public Welfare will be combined the present functions of the State Board of Administration, the Board of State Charities, the Ohio Commission for the Blind, and the Board of Clemency, with divisions as follows: Fiscal supervisor, superintendent of charities, superintendent of pardon and parole and a board of pardon and parole consisting of three members, one of whom is the superintendent of pardon and parole. The other two members are appointed by the department director.

The Kumler Bill, (Senate Bill No. 184) passed by the Senate on April 29, was a bone of contention in the House of Representatives on Saturday, May 14, just prior to adjournment. The bill as it passed the Senate, included in the definition of the practice of medicine, the administration of anesthetics, and repealed Section 1286-2 of the General Code permitting registered nurses to administer anesthetics in the presence of, and under the direction of a licensed physician.

In the public health committee of the House, the bill was modified by the re-insertion of Section 1286-2 and with the additional provision that nurses before being permitted to administer anesthetics must take a prescribed course in anesthesia of at least 24 weeks in a hospital or training school approved by the State Medical Board. On the floor of the House, a valiant attempt was made to amend the proposal as modified by the public health committee, and to preserve the provisions as enacted previously by the Senate. The formidable opposition, however, could not be overcome and the amendment offered on the floor was voted down, and under inauspicious circumstances, with barely a quorum present, the bill as amended in the House Committee was defeated by a vote of 19 to 46.

In the matter of health and welfare legislation, the Eighty-Fourth General Assembly may be characterized as conservatively constructive. Its enactments in this field were intended to correct or improve present conditions. In this field of health and medical problems, the legislature wisely refused to enact numerous bills which were introduced of a radical and destructive nature, including cult proposals and special privilege requests.

Next Stop Boston!

No Ohioan who can possibly spare the time should miss the seventy-second annual session of the American Medical Association in Boston, June 6-10. Ohio physicians will take important parts in the program, and this state should have a registration commensurate with the excellent ranking accorded it among the states in scientific and organization medical matters.

The Special Field of Neurological Surgery After Another Interval*

Harvey Cushing, M.D., Boston, Mass.

Surgeon-in-Chief of the Peter Bent Brigham Hospital, Boston.

(Continued from the May Issue)

STUDIES ON THE CEREBROSPINAL FLUID CIRCULATION

It is true of all intracranial operations that in the knowledge of ways and means of controlling tension lies the secret of surgical success. Intracranial over-tension is largely a matter of an increase in the fluid content of the chamber, whether it exists as free fluid in the ventricular and arachnoid spaces or as an edema, a state to which the nervous tissues are particularly prone. Though formerly the extensive withdrawal of fluid was looked on with apprehension, it has come to be an essential step in many cranio-cerebral operations, during the course of which the fluid, either from ventricles or arachnoid spaces, is not only thoroughly evacuated but may be permitted to drain away during the course of a long operation. There may be ways other than by external drainage of accomplishing the same thing, but to this we will return.

One of the problems which confronts the neurosurgeon is some method of dealing with the disturbances of cerebrospinal fluid outflow which lead to such malformations and disorders as spina bifida and essential hydrocephalus. In the latter condition, operations innumerable have been advocated since the earliest time, none of them proving to be based on correct principles if one may judge from their lack of success in practice. I have always cherished the view that most of these hydrocephalic conditions were produced by some failure of development of the points of escape for the fluid from the cranial chamber rather than, as was long supposed, from a fault or obstruction at the foramen of Magendie. The fact that in most cases the fluid could be withdrawn from the ventricles by a lumbar puncture, in other words, that it had access to the subarachnoid spaces, certainly seemed to favor this view.

Some early studies on hydrocephalus were carried out in the Hunterian Laboratory with Walter E. Dandy in 1910-1911. It was found possible not only to catheterize the aqueduct of Sylvius but to produce an experimental hydrocephalus by mechanically obstructing it. At the same time some early attempts were made to investigate the functional activity of the plexuses but we did not get very far with them.¹⁷

It became apparent that it would be necessary to carry our studies to the meninges if we were to find the most likely sources of obstruction. This work was undertaken by Lewis H.

Weed in conjunction with Paul Wegeforth in the Surgical Laboratory during my first two years at Harvard. In the introductory notes to the series of reports on this work¹⁸ a statement of the problems we had set ourselves to solve, so far as time would permit, is as follows:

* * * Granting that the choroid plexuses are the chief source of the cerebrospinal fluid—and this has not been conclusively proved—is the process, as some believe, a transudation, or an actual secretion, or, as Mestrezat regards it, a mere dialyzation from the blood? What conditions activate and what conditions inhibit these choroidal glands? Have they an internal as well as an external secretion? To what primary diseases are they subject? How early in embryonal life do they secrete? Why does the fluid which they elaborate differ so greatly from that secreted by most other glands? Why are the cells so impermeable to the passage from the blood stream of drugs and of substances such as the bile pigments which, in conditions of jaundice, quickly stain all other body tissues and fluids?

Granting that the fluid thus secreted by the choroid plexuses leaves the ventricles and spreads over the brain and down the cord in the subarachnoid spaces, does it receive accessions from elsewhere, from the ependyma or from piality of pineal glands? Are there lymph channels in the brain, and if not, how does the central nervous system dispose of its products of tissue waste? If there are cerebral lymphatics do they discharge into the subarachnoid spaces and is the subarachnoid fluid therefore of the same character chemically, physically, and cytologically as the ventricular fluid? Why normally is the fluid practically limited to the subarachnoid spaces, and under what conditions does it become subdural?

Granting that fluid may escape by way of the Pacchionian granulations, is this the chief or only manner of escape? If an important avenue, why are these structures lacking in the lower animals and in the human infant? Are these granulations therefore pathologic processes, and if so what are their precursors? Are there other means of fluid absorption along the nerves by way of the lymphatics, and if so how important are they? How do the spaces in the pia-arachnoid develop and do the choroidal glands mature and secrete before or after their formation? Are there faults of development at these meningeal outlets for fluid which can account for congenital cephaloceles? Are there analogies in the fluid which can account for congenital cephaloceles? Are there analogies in the fluid circulation of the eye to which we may attribute the disturbances of circulation of the intra-ocular fluids?

Weed, by adapting the principle of injection of nongranular fluids from which granules might subsequently be precipitated, showed conclusively that the arachnoid villi represent the points of escape for fluid which, by a process of seepage, enters directly into the pachymeningeal sinuses. It was, I believe, Wegeforth's proposal that in cases of hydrocephalus a series of direct punctures be made directly through the sinuses into the subarachnoid spaces, under the assumption that the puncture holes would become occluded by arachnoid, making thereby new and artificial villi through which fluid might escape.

Weed's continuation of these studies on his return to Baltimore and his demonstration of the manner of development of the fetal arachnoid spaces which I assume (though the point remains to be proved) to take place when the choroid plexuses first begin to secrete actively, certainly stands as the most important contribution to our knowledge of the meninges since Key and Retzius.¹⁹

17. Studies on the Cerebrospinal Fluid and Its Pathway, J. M. Res., Vol. 31, p. 1, 1914.

19. The Development of the Cerebrospinal Spaces in Pig and Man, Contributions to Embryology No. 14, Carnegie Institution Publications No. 225, 1917, p. 116.

17. Dr. Dandy has recently reported the results of these and some more elaborate subsequent studies which he undertook independently. By an ingenious method he has been able to show quite conclusively that the fluid is elaborated by the plexus without the ependyma taking any part in it. Experimental Hydrocephalus, Trans. Am. S. A. Vol. 37, p. 397, 1919.

If it is true that most cases of congenital hydrocephalus can be accounted for by a faulty development of the villi, the rational treatment is to reproduce in some way this channel of outflow either by direct drainage into one of the larger sinuses or by encouraging the formation of new villi in the manner Wegeforth suggested, rather than by an attempt to check the formation of fluid.²⁰ At least it is along these lines that our surgical efforts have tended of late years. Certainly no form of drainage into tissue spaces is effective, for by a curious property of the extracranial tissues when they are made edematous by cerebrospinal fluid leaking into them, a smooth endothelial-lined sac ultimately forms which is impervious to the further escape of fluid.

Such a procedure as Dandy has shown to be surgically possible, namely, the excision of the plexus from within the dilated ventricle, can hardly be expected to serve the desired purpose, for if there are any remaining fragments of plexus (and it is a complicated organ) the same degree of tension should recur so long as the ultimate outlets for the fluid are defective.²¹ Possibly no more conclusive argument than Weed's more recent paper²² could be given favorable to the view that imperfect formation or occlusion of the villi is one source, if not the most common one, of what has been called idiopathic (for lack of understanding of the process) hydrocephalus. By injecting a suspension of lamb-black into the cerebrospinal spaces of kittens, he was able to produce extreme degrees of internal hydrocephalus quite comparable to similar conditions seen in human infants.

At the present moment there are two or three new proposals before us which have a bearing on the cerebrospinal fluid and its spaces, and though admittedly still in an experimental stage, one or all of them may come in time to have considerable importance from a diagnostic as well as therapeutic standpoint.

In a recent paper, which has aroused great interest,²³ Dandy has put forth some very definite claims regarding the localizing value in cases of brain tumor, of what he calls *ventriculography*. This, in other words, is the taking of roentgen-ray plates of the cerebral ventricles after their fluid contents have been removed and replaced by air.

20. In his more recent paper (The Diagnosis and Treatment of Hydrocephalus Resulting from Strictures of the Aqueduct of Sylvius, Surg., Gynec. & Obst., Vol. 31, p. 340, 1920), Dandy estimates that 66 per cent. of all cases of congenital hydrocephalus are due to Sylvian obstruction. If this is true the agency of obstruction to which we have devoted attention is less common than we had supposed.

21. Grave doubts have been expressed by Becht and his coworkers as to the justifiability of the common assumption that the plexus is an active secretory organ and therefore that there is such a thing as a cerebrospinal fluid circulation (Becht, Frank C., and Matill, P. M.: Am. J. Physiol. Vol. 51, p. 1, 1920). If they are correct and we wrong, our entire theorem falls to the ground.

22. The Experimental Production of an Internal Hydrocephalus, Contributions to Embryology No. 44, Publication No. 272, Carnegie Institution, 1919, p. 425.

23. Dandy, W. E.: Localization or Elimination of Cerebral Tumors by Ventriculography, Surg., Gynec. & Obst., Vol. 30, p. 329, 1920.

It is quite certain that in some rare conditions a more exact localizing diagnosis might be made in this way than in any other, and, in the case of tumors situated in silent areas above the tentorium which have led to dilatation as well as deformation of one of the ventricles, perhaps only in this way. That the procedure may be sufficiently developed and safeguarded so that it can be routinely utilized for this purpose is quite within the realms of possibility.

One particularly striking case has been included in Dandy's report, whereby an unsuspected tumor in the right occipital lobe was disclosed, though one must confess that it might have been capable of localization by earlier and more exact perimetry. However, as I have stated, the procedure is in an experimental stage and surgeons may safely leave it in Dr. Dandy's hands to work out more thoroughly its possibilities as well as its hazards, as he doubtless intends to do; and it would be highly desirable under these circumstances for every one who undertakes the procedure to notify its inventor of their experiences and particularly of the accidents. In this way only will he be able to establish the proposal on a safe basis acceptable to others, as all hope that he may be able to do. That there have already been a goodly number of fatalities, doubtless in the hands of people less expert than the author of the method, is well known. It will soon have a bad repute if so much is expected of it as is given in the author's conclusions, and if the surgeon is encouraged to believe that henceforth he will have less need of exercising his neurologic knowledge in localizing brain tumors.

Another procedure likewise in an experimental stage, though capable, it is hoped, for further development, is the diagnostic *puncture of the cisterna magna*, a procedure worked out in the Army Neurological Laboratory under Dr. Weed's direction during the war, and which has subsequently been warmly advocated by James B. Ayer.²⁴ When one realizes how loath the profession was to adopt Quinke's lumbar puncture as a more or less routine measure, one hesitates to say that a suboccipital puncture will not some day come to be as commonly employed. However, even a lumbar puncture is not without risk, as those are well aware who have seen patients with unrecognized cerebellar tumors die from respiratory paralysis soon after one has been made; and the risks of a puncture of the posterior cistern under similar circumstances would be infinitely greater. Hence this procedure, like the foregoing, had best be left in the hands of its sponsors until they can give us complete details not only of the method but of its diagnostic and therapeutic possibilities, and above all of its hazards.

But probably the most suggestive papers is—

24. Wegeforth, P.: Aver, J. B., and Essick, C. R.: The Method of Obtaining Cerebrospinal Fluid by Puncture of the Cisterna Magna (Cistern Puncture), Am. J. Med. Sc., Vol. 157, p. 789, 1919.

sued by this laboratory during its short life were those by Weed and McKibben²⁵ on the experimental alteration of brain volume following the intravenous injection of various substances in solution. They observed that, after the cortex was exposed by a trephine opening, the intravenous injection of a watery solution caused the brain to protrude through the opening, and contrariwise, that a hypertonic salt solution caused it to recede, sometimes to a very extraordinary degree.

That these observations had great possibilities of clinical application was immediately apparent to all, and Dr. Foley and others in my clinic have made it a matter of special study.²⁶ They found, in the first place, that it would answer almost as well to give sodium chlorid by mouth, and it is at times quite amazing to see what an immediate symptomatic effect, particularly when there is increased intracranial tension, this simple procedure may have.

That it is not entirely free from risk we have reason to know, but that it has great future possibilities of application we nevertheless are encouraged to believe, though here again it is a matter of slow painstaking observation on the part of a few rather than indiscriminate observations on the part of many, which in time will establish its therapeutic and diagnostic possibilities and risks. As has been realized for a long time, the application of biophysical knowledge to the problems relating to the nervous system promises large returns, and Weed and McKibben's studies lie in this direction.

It would be premature to pass on the future role which any one of these three measures I have mentioned may come to play. Let us hope that they will not suffer a wave of wild popularity, to be cast off like von Bramann's callosal puncture, as good for nothing, simply because it could not do in others' hands everything and more than its author claimed for it.

THE SPINAL CORD

I have read over the general statement in my papers of ten and fifteen years ago regarding the surgery of the spinal cord, and though I might give many additional illustrations I do not know that there is very much to add to the general principles of these operations then described. There are more things, possibly, to retract than to add.

Infections.—in 1910 Flexner's serum for cerebrospinal fever had just been introduced and held the stage, but I fear that we are no further advanced in our treatment of other forms of meningeal infections than we were at that time,

though proposals for irrigation and drainage of the meningeal spaces recur at more or less frequent intervals.

Great hopes were aroused, particularly from a prophylactic standpoint, by Crowe's discovery of the passage of hexamethylenamin through the choroid plexuses and its prompt appearance, after administration by mouth, in the cerebrospinal fluid. We did not know at the time that it appeared unchanged, and that only in an acid medium like the urine was it broken up with the liberation of formaldehyd. Crowe's observations, however, on the efficacy of the drug, particularly as a prophylactic, in experimental canine meningitis were nevertheless so convincing that we have continued with its use in certain conditions—in patients with basal fracture, before trans-sphenoidal pituitary operations, and so on. It certainly does not harm, though we may have been leaning on a broken reed.

In view of the fact that most of these pathogenic cocci are acid producers I have harbored the idea that in process of their multiplication enough acid may be given off by them to liberate a certain amount of formaldehyd in their immediate vicinity, without producing an appreciable change in the reaction of the fluid as a whole—in short, that in this way, even though the cerebrospinal fluid retains its faintly alkaline reaction, the growth of organisms may nevertheless be locally inhibited. We have attempted by physicochemical tests to demonstrate the truth or otherwise of this conjecture, without any really definite conclusions.

Tumors.—As stated before, there is no more satisfactory operation in surgery than the removal of an accurately localized endothelioma of the spinal meninges—no operation unless it be for some of the major trigeminal neuralgias, in which the transformation from a suffering and bed-fast invalid to a normal life is more like resurrection. One may imagine the elation which Horsley and Gowers must have felt in 1888 on the occasion of their epochal first case.

My experience with these enucleable tumors has not been great—only seven cases additional to the one mentioned in my 1905 address which had been reported elsewhere.²⁷ Of many things I have learned in fifteen years, one is to beware of reporting cures. This man had a recurrence of his symptoms, and some years later, at a secondary operation, a growth was disclosed which to all appearances might have been the primary one. On this second occasion it was removed, together with the subjacent patch of meninges, and there has since been no recurrence. The lesson was thereby learned that it does not do merely to tilt these lesions out; their meningeal attachment from which they take origin must also be removed, and this is not altogether easy since the

25. Pressure Changes in the Cerebrospinal Fluid Following Intravenous Injections of Solutions of Various Concentrations, *Am. J. Physiol.*, Vol. 48, p. 512, 1919; *Experimental Alteration of Brain Bulk*, *ibid.*, p. 531.

26. Foley, F. E. B., and Putnam, T. J.: The Effect of Salt Ingestion on Cerebrospinal Fluid Pressure and Brain Volume, *Am. J. Physiol.*, Vol. 53, p. 462, 1920.

27. Intradural Tumor of Cervical Meninges with Early Restoration of Function in the Cord After Removal of the Tumor, *Ann. Surg.*, Vol. 39, p. 935, (June) 1904.

central point of attachment seems invariably to be at the point of emergence of a segmental nerve root.

It is astonishing how promptly it begins and how great a degree of functional recovery is possible in the flattened cords long subjected to pressure by such a tumor. What is more, the promptness with which this restoration sets in may be taken as an evidence of the delicacy with which the tumor enucleation has been conducted. The last of these patients in the series gave the history of having had a cancer of the thyroid removed in 1900 and in 1903 a cancer of the breast; consequently when her spinal symptoms began to appear a few years later they were naturally attributed to a metastasis. For this reason an exploratory operation was thought inadvisable, and she gradually became bedridden from paralysis. However, the results of a neurologic examination, coupled with the characteristic manner of onset of the symptoms, were so unmistakably in favor of a spinal endothelioma that an exploration was urged and the expected lesion found and removed. Voluntary movements in her previously paralyzed extremities were possible the afternoon of operation, and before her discharge she was walking with slight assistance and now, a few months later, goes about alone.

From these brilliant results, which are all too few, there is a long gradation of less and less favorable cases to the malignant growths at the other end of the scale. No sufferers so greatly tax one's sympathies as the victims of malignant spinal metastases, and in 1910 I find that I had even suggested "the deliberate trans-section either of the entire cord or of the posterior columns alone, cephalad to the lesion." The alternative of pain or complete permanent paralysis is hard to face, for patient as well as surgeon, and it was one which I had shrunk from until a few years ago, though fully aware that the victims of a trans-section the result of a crush usually lead an existence free from pain and surprisingly often take a curiously detached and philosophic view of their plight. This peculiar dispositional attitude of mind has seemed, in short, to be a mental attribute consequent on the abolition of all impulses from the lower body.

Much against my wishes, there was admitted to the wards in 1916, a woman suffering great pain from an obvious spinal metastasis, attributable to a breast amputation for carcinoma performed twenty-five years before. As her paralysis below the twelfth thoracic level was nearly complete, it did not seem possible that she could live long. For months her pain had been controlled by morphia, which seemed the only recourse. She, however, held out for months, courageous and cheerful though begging for some operative relief, until finally with many misgivings I divided the cord in the more accessible thoracic region well above her lesion. The results far exceeded both the patient's and my own expectations. She had

no more pain whatsoever, narcotics were completely withdrawn, she gained in strength and color, acquired an automatic bladder control and lived in really great comfort, bodily and mental, despite what she knew to be in store for her. The end came six months later—the easiest and happiest end in a case of this kind of which I have cognizance.²⁸

Akin to this, though less radical and advocated for less critical conditions, are other palliative measures which have been put in practice. Forster's posterior root division in cases of tabes, which is but a development of the old operation advocated for intractable neuralgias of amputation stumps, is one example; another is the procedure which Frasier and Spiller have described, of dividing the anterolateral columns alone, a procedure similar to that which I suggested in 1910, though based on more accurate localization of the pathway for pain.

Trauma.—What was said on this score from a surgical point of view in my first paper; I do not think I can now improve on—the division into (1) the hematomyelias, (2) the total cross-lesions usually from fracture dislocation, and (3) the partial injuries, these being the only ones suitable for surgical intervention. The difficulty lies in distinguishing the three groups, and one must acknowledge that there is no sharp dividing line between them. In this respect, however, we will have learned much, chiefly through a study of the victims of spinal gunshot wounds in the late war, though it will probably be a long time before all the material is thoroughly studied. Placed as some physicians were, Colonels Sargent and Holmes, for example, at one of the important British bases, it was possible to secure specimens for later study of lesions of practically every segment of the cord in a series of cases which had been previously subjected to a thorough neurologic study. Madame Déjerine's opportunities with the spinal injuries occurring in the French army were almost as favorable, and she has already published some extraordinary observations concerning ossification of the muscles in areas below the segmental level of the lesion.

Many remarkable and unknown facts were brought to light regarding the localization of function in the cord, but possibly the most immediately arresting were the studies of Henry Head and his co-workers.²⁹ Their observations have shown that, even when in its cross extent the lesion has been anatomically complete, the cord distal to the lesion is capable of resuming its reflex function to a degree hitherto unappre-

28. Her death occurred while I was overseas, where the following letter was received from her husband. It may deserve quoting in view of the rarity of such a procedure. " * * * After the operation she was brought home in May, and enabled to enjoy the birds and flowers and go out in a wheel chair. She finally very slowly yielded to the disease, passing from us October 31, nearly a year from the time she entered the hospital. She was cheerful and patient during all her illness but beyond digestive troubles she had little pain and nothing acute. * * *"

29. Fearnside, Head and Ridgock: *Brain*, Vol. 40, Pts. 2 and 3, 149, 1918.

ciated. This process, in the absence of infection, begins to set in after the third week, at which time the lower spinal reflexes begin to reappear. Hence the old conception of a permanent loss of deep reflexes with flaccid paralysis as an indication of a total trans-section falls to the ground.

Though these observations are of great importance in advancing one's physiological knowledge, they do not necessarily affect in any apparent way our surgical procedures, except to influence surgeons to favor in every way possible the return of the so-called automatic bladder reflex which enables the unfortunate victims of these injuries to hold their urine for a few hours at a time.

This involves a problem relating to the care of these patients for which the war does not seem to have given a satisfactory answer, namely, the correct method of dealing with the bladder in the early stage of retention. The main desideratum, if one hopes to attain for his patient a subsequent automatic bladder control, is the avoidance of infection, and whether a constant drainage by catheter from the outset, repeated catheterization suprapubic drainage, or the avoidance of any direct interference whatsoever and letting the bladder distend till it dribbles—which of these methods is best, no one so far as I am aware was ever able satisfactorily to determine, nor in this generation, will we again, let us hope, have so good an opportunity of finding out.

One thing the observations of Head have served to explain are the mystifying reports which have appeared in the literature from time to time regarding the restoration of function in a completely severed spinal cord after a laminectomy and suture. Unquestionably they were faulty observations to be explained by the reappearance of these lower spinal reflex movements which were erroneously interpreted as an evidence of transmission of impulses from above.

THE PERIPHERAL NERVES

The surgery of the peripheral nerves, other than cranial, belongs largely though not entirely in the domain of traumatic surgery, and as injuries of the larger nerves are often coupled with deformities and need what is called physiotherapy, together with some supporting apparatus in their after care, a bid for these lesions during the war was made by the orthopedists.

It was calculated that fully 25 per cent. of all major injuries of the extremities were accompanied by a more or less serious involvement of important nerve trunks, and it makes little difference who cares for them—if an orthopedist, he must have a better neurologic training and operative technique than most possess; if a neurosurgeon, he must familiarize himself more than he is accustomed to with the mechanical correction of paralyses. The subject at all events received a great fillip during the war, and much has been learned and much unlearned regarding

nerve sutures. Attention may be called to a few points which stand out clearly from the great number of published observations.

It has long been known that divided nerves, given half a chance, tend to reunite. Indeed, under circumstances when a purposeful section or avulsion of a nerve has been made it is well nigh impossible at times to prevent some degree of functional reunion. This the old-time peripheral operations for facial neuralgia made only too clear. What takes place has been more or less a subject of academic dispute between the supporters of the neuron doctrine and those of Bethe's school who believed in the possibility of a peripheral regeneration of axons. Though Bethe undoubtedly found axons in the peripheral segments, Langley's explanation of their presence was doubtless the correct one. In short, the proliferation of the cells of the neurilemma sheath is the only peripheral process and though this prepares the way for the axon, unquestionably the axis cylinder must grow down from the proximal segment.

From the great mass of material of the past few years the curious observation was soon made that certain nerves show a much greater tendency to perfect functional reunion than others. To take a single example, the prognosis after injury and suture of the musculospiral was far better than after a corresponding injury of the median. This appeared, moreover, to have no relation to the distance between the seat of the injury and the periphery, for a high radial suture was more favorable than a low median. The explanation for this which seems best to meet the facts is that the functional recoverability bears relation to the degree of purity, whether sensory or motor, of the nerve in question. Thus the musculospiral nerve has a great preponderance of motor fibers and consequently after suture there is less chance of motor axons finding their way down sensory pathways and the reverse than if the number of sensory and motor fibers were more nearly equal, as is true of the median.

This at least is the interpretation which appears best to fit the facts before us, though it is one which is difficult for me to believe as it seems a poor provision of Nature. Though we have little knowledge of what the nerve impulse really is, much less of the distinction between a motor and sensory impulse, there certainly must be some chemical difference between the two nerves which would lead us to assume a predilection of down-growing sensory axons for sensory paths and motor for motor.

Be this as it may, it is assumed that, when an imperfect functional result follows what seems to be a simple and perfect nerve-suture as so often happens after median nerve sutures, the majority of motor fibers have grown down into sensory sheaths to sensory end organs whose messages they are incapable of transmitting, and

the majority of sensory fibers likewise to motor end organs.

This interpretation may be quite wrong, though as I say, it seems to fit the facts and, if correct, it would appear to favor such detailed operative procedures as Elsberg has described, based on Déjerine's studies of the cross sectional topography of bundles in the peripheral nerves. However, even if it is surgically possible to approximate a divided peripheral nerve, bundle for bundle, in the process of a nerve suture, which I doubt, there is something other than end-to-end proximity—and it is only a matter of millimeters—which attracts the wandering axon into some particular peripheral tube. Indeed one may see a perfect functional result when an actual (though small) gap has been left, or contrariwise, an imperfect result with the most painstaking approximation.

One thing has been made clear beyond question, and that is the supreme desirability of bringing the two ends of the several nerve together without the interposition of a bridge, and ingenious ways and means of accomplishing this have been devised, not only by stretching and by mobilization of the nerves, but by shortening the gap in case of great loss of substance by retaining the limb in a position of acute flexion until union has taken place.

Losses of substance of several inches can be overcome in this way, and it has meant the abandonment of the pre-war ideas regarding tubularization and implantations as a means of overcoming gaps—procedures which by increase in scar formation doubtless served to defeat the very object they were intended to serve. To be sure, there have been some remarkable recoveries, particularly in musculospiral nerves after the implantation of nerve autografts,³⁰ and Nogeotte, whose experimental studies have been extensive, favors the implantation, if one must be made at all, of a section of nerve from another source (homograft), which has been fixed in alcohol, but of this I have no experience.³¹

Unquestionably, interest in all these matters aroused by the war has turned the attention of many of our younger surgeons with renewed interest to some of the neurologic problems of surgery. Brief courses were given in New York, Philadelphia and St. Louis, largely under the direction of Drs. Elsberg, Frazier and Sachs—which served further to concentrate attention on the subject and to give certain medical officers, whose inclinations lay in this direction, some general ideas of traumatic neuro-surgery.

Excellent as all this was, it is a far cry from traumatic to pathologic surgery, from doing a peripheral nerve suture to a trigeminal neurec-

tomy, from the repair of a cranio-cerebral injury to the removal of a brain tumor. Then too, the lack of personal responsibility about one's army patients—a responsibility entirely assumed by the Government—coupled with the difficulty or impossibility of learning of one's end results, did not inculcate in many medical officers the fastidiousness of clinical study or operative technique which is a *sine qua non* of success in civil surgery and above all of civil neuro-surgery."

A National Institute of Neurology.—Though as a matter of fact it was the first time that such a special line of work as is represented by neuro-surgery was recognized by an Army Medical Corps, the department was not utilized to its full capacity for many reasons, not the least of which perhaps was the old chauvanistic idea that he who is called a general surgeon must do equally well all things surgical. Nevertheless, the desirability and need of specialization in military medicine more than in any previous war came to be accepted as a principle, and in some divisions of the service where it obviously could prevent wastage of man power, it played an important role.

Those of us, however, who had the overseas responsibility for the care of such injuries of the nervous system as would incapacitate soldiers for further service, aware of the fact that these men would be the last of all our wounded to recover, and even then very imperfectly, were disturbed by the lack of coordination of neurologic interests which possibly the scramble during our short period in the conflict made inevitable. Since most of the surgeons delegated to the neuro-surgical subdivision had only a meager neurologic training and the neurologists were all occupied in the important field of psychiatry none of us got as far with our neurologic problems as if we had been organized together.

Cognizant of all this, Drs. Salmon, Schwab, McCarthy and myself, after many conferences, were unanimous in the feeling that some more effective organization should be brought about and that centers should be established where psychiatrist, neurologist, neuro-surgeon and neuro-pathologist could be brought together, and

32. I have not touched on the survey of the cranial nerves, as this address is already too long. There are many interesting and important aspects of this topic, though possibly the surgery of the trigeminus, and of trigeminal neuralgias in particular, overshadows all else in this particular domain.

I have made these major neuralgias the subject of a recent study, and the results, given a year ago in the Hatfield Lecture before the College of Physicians of Philadelphia, are in process of publication. It may suffice to say that the modern operation of sensory root avulsion, whoever may deserve the main credit for evolving the procedure, is an operation practically free from risks and with a mortality lower than that of almost any other so-called "major" operation in surgery.

In my own series, now comprising 348 cases, there have been only two fatalities, the ninth and thirtieth cases, both of them dating back to the days when efforts were made to remove the ganglion together with the root in their totality. There have been 318 consecutive cases without a fatality. There is no other operation in surgery which can so completely relieve such an incapacitating malady and with such slight risk. There are possibly 5 per cent. of the cases which are not cured, cases in which the diagnosis was incorrect and in which the facial pain, supposedly trigeminal, is really of some other origin.

30. Madame Déjerine informed me of a perfect result in a French officer in whom a gap of 7 cm. was thus bridged.

31. The conclusions of G. Carl Huber, Dean Lewis and others (Repair of Peripheral Nerve Injuries, Surg., Gynec. & Obst., Vol 30, p. 464, 1920) in relation to the bridging of gaps seem to be very much in accord with those of Nogeotte.

where functional as well as organic cases could be seen and studied and treated conjointly for the benefit not only of the soldier but of neurology itself.

This is all past history which I have gone into more fully on another occasion," but I touch on it again for the reason that out of these conferences there developed the idea of a National Institute of Neurology. The four men whose names I have mentioned agreed to withdraw from their pre-war engagements to take full-time positions in such an institute, provided the necessary funds could be secured for its establishment on a generous national scale. No one could possibly have been better fitted to launch and direct such an institute than Colonel Salmon, whose interests largely lie in the sociological aspects of neurology. It was hoped that under him, as subordinates, a neurologist, a psychiatrist and neurosurgeon might each have a hospital ward for their special cases, and that the neurological laboratory, which under the direction of Major Weed in Baltimore had done such admirable work during the war, might be taken over intact. It was assumed that during its first few years this institute would be entirely at the disposition of the government and the army for the care of the neurologic cases which, as I have said, remain the last precipitate of the war injuries—cases which now, alas, are widely scattered.

The venture proving a success, as it almost certainly would have done, it was anticipated that with the war work finished it would become a national center, an institute and hospital, for the study of disorders of the nervous system—a central rallying place where psychologist, psychiatrist, neurologist, neurosurgeon and experimental pathologist could work in cooperation—a training ground as well for their successors who for the first time in any country would be given an opportunity, after graduation, for a broad general neurologic training.

This, gentlemen, is by no means an idle dream. The situation two years ago was most favorable for the inauguration of such a movement, a movement whose ultimate objects were to bring intimately together all of those who from one aspect or another are attacking problems relating to the diseases of the mind and the nervous system. There is nothing which is possibly of more vital concern to the nation than a knowledge of the mental disorders to which its citizens are subject. There are few things relating to the health and well-being of the community more neglected. For a single imperfectly endowed clinic for the study of mental disorders probably twenty institutes for the study of cancer, of infectious diseases and so on have been established, whereas the insane forgotten in our asylums and those with nervous and mental disorders who helplessly

frequent our clinics and outpatients departments out number all other patients by far.

This project may seem far removed from neurologic surgery, but I have an instinctive feeling that some day such an institute on a scale as large as the recently founded Institute of Hygiene will come to be established. When that day arrives, the neurosurgeon will of necessity be a participant, and from the contacts therein possible will come to have the proper neurologic training essential to the success of his particular field. He will need a preliminary general surgical training, but he will nevertheless have to be a product of a school of neurology in a broad sense, such as we do not now possess, nor does any other country.

* * * *

In the preamble to this address regarding specialization in general, my hearers have been aware, between the lines, that I was reading my own confession into what was written. It is true, for despite a reasonably broad surgical preparation, I confess to have climbed into neurology by the outlying route described. It is for this reason that I thoroughly understand how essential it is for the neurosurgeon of the future, if he is really to do justice to this new specialty, to have a far better grounding in clinical neurology and psychiatry than I have had, for he must make his own diagnoses and must have an intimate knowledge of neuropathology if he is to know what conditions are amenable to surgical therapeutics.

Many people are eager to enter this field of work. Hardly a month passes without some well established surgeon writing to ask whether his assistant may be given some instruction in "brain surgery" and can we take him. We are glad to do all that is possible. "Yes, he attended lectures in neurology as an undergraduate, and then there are colleagues who will make his neurologic studies and use the ophthalmoscope for him." He comes and spends a short time as an onlooker and returns to his clinic a neurosurgeon.

It will be a bad thing for neurologic surgery when it becomes fashionable. Gynecology has already suffered from this, and orthopedics is in the way to follow. Tendencies in this direction, to my despair, are apparent. Glad as I am to feel that the importance of the subject as a special line of work is becoming recognized, and confident as I feel that the day will come when professors of neurology in our schools will have had a surgical training just as the present-day gynecologist and orthopedist must have, nevertheless the way to bring about this desired end is not through the surgical operating room alone, but by the slow process of the neurologic clinic and the laboratory. Let us hope that some day in a national institute, such as I have described, the all-around training which is essential may be

33. Concerning the Establishment of a National Institute of Neurology, *Am. J. Insanity*, Vol. 76, p. 113, (Oct.) 1919.

properly acquired by medical graduates desiring to enter this field.

But for its own good, I pray that neurologic surgery may never get so far from the home of

general medicine and its immediate parent, surgery, that there will be an estrangement, or any possibility of its being shut out of doors when the time comes for its return.

Conjunctivitis Blennorhoica*

F. A. Grafe, A.B., M.D., Cincinnati

Editor's Note.—In spite of state and nation-wide efforts to control blindness due to infection of the eyes at birth, this deplorable accident still occurs entirely too frequently. Hence the importance of having at one's command a routine method of prophylaxis and an efficient method of treatment. As Dr. Grafe suggests it is discreet to examine vaginal secretions at the time of being engaged for delivery. There is also a measure of safety in preparing the field as for vagino-abdominal operations. Care should be exercised in removing the protective vernix caseosa, which acts as the natural barrier against infections. Silver nitrate or argyrol are still the accepted prophylactics. In the presence of conjunctivitis blennorhoica, Dr. Grafe has found mercury oxycyanide a valuable and dependable remedy.

He tarried in the Grove of Daphne,
Its lawless love embraced;
He listened to the Song of the Siren,
Forgetting the danger he faced.
She wandered in the field of the lilies,
With the purest her hours she spent;
She harkened to the voice of creation,
Then bowed in submissive consent.
Together they stood on life's threshold,
The living embracing the dead;
"The past is mine, and forgotten,
The future but yours," he said.
The months rolled swiftly to dreamland,
The hour of sadness foremost,
In the love of the newly created,
The pangs of the partus were lost.
She watched with tender emotion,
The infantile orbs of blue,
With constant maternal devotion,
Those heav'n given orbs of blue.

SIGNS AND SYMPTOMS

ON THE morning of the third day after birth the eyelids are preferably closed; there is a slight, faintly yellowish accretion at the medial angle, the margins are a trifle reddish, otherwise no external symptoms are in evidence. When the lids are opened, it at once becomes apparent that the normal secretion of the conjunctiva is increased in quantity and altered in quality; it has assumed a faintly serosanguinolent consistency, and escapes rather freely.

The conjunctiva tarsi et fornicis has lost its normal transparency, its color is of a deeper red, the conjunctiva bulbi appears to be unaltered.

Within a few hours the picture changes; the conjunctiva tarsi et fornicis become rapidly swollen, infiltrated, edematous; the exudate assumes a wine color, becomes copious; the lids cannot be opened spontaneously; the cutis be-

comes stiff and tense, drumlike, of a livid red, painful to the touch.

On the third day of the disease the secretion becomes a creamy yellow; it spontaneously escapes at the angles of the lids; when the lids are forcibly opened, the secretion spurts forward in such large quantity as to soil the attendant. The conjunctiva tarsi et fornicis is bluish red, much swollen, bleeds easily, the papillæ conjunctivæ tarsi are prominent, the whole resembling a piece of velvet. The conjunctiva fornicis protrudes in thick folds, coxcomb-like, a gray fibrinous exudate appears on the conjunctival surface, and reappears again and again after thorough removal. Though the lids are forcibly ectropionated, it is with added difficulty that the eye itself becomes visible.

Meanwhile, the conjunctiva bulbi has become infiltrated; the cornea is not escaping the brunt of the battle. The epithelium loses its normal luster; it becomes dull, peels off, being replaced by a grayish surface—a dell which becomes deeper and larger—and then a sudden gush, and with the escape of the aqueous, the intense pain subsides; the child rests easily. Weeks of agony have been supplanted by a mother's eternal hope, for "the child is better." The exudate decreases in quantity, becomes mucoid in appearance and consistency; the lids become soft, the swelling of the conjunctiva decreases, except that for a long time its surface remains uneven. Time remedies even this defect.

THE PENALTY

After the battle is over, we count our dead. After the darkest night appears the golden sun, which shines equally for the just and unjust. Just one more unfortunate has been added to the large number of those "who have eyes and see not" and all because the father "tarried in the Grove of Daphne and listened to the song of the Siren."

A MILITARY PROBLEM

Recent statistics, regarding exposures of our

*Reprinted from *The American Physician*, February, 1921.

troops, show that "there resulted one infection to thirty exposures," from which we may conclude that thirty exposures to an individual mean certain contamination. Considering the multitudinous cavernous recesses which offer potentially safe hiding places to the invading foe, is it any wonder that total eradication ranks among the impossibilities, and, consequently, that the chances of communication to the innocent should receive the consideration of an assumed fact?

He who surgically invades corporeal continuity is bold, indeed, if priorly he does not remove the chances of infection from adjacent contaminated foci.

TREATMENT

Our treatment of conjunctivitis blennorrhoea must begin, not at the time when the creamy secretion escapes in profusion from the eyes of the neonatus, nor when bacteriological examination shows the presence of the Gram-negative diplococcus, but when we are "first engaged for the delivery." Vaginal secretions must frequently be examined, and if positive in results, immediate, thorough, appropriate treatment must be instituted. When "the hour of sadness" has arrived, the field must be cleared of superfluities, prepared as for vagino-abdominal operations. The attendant should be a trained nurse, but if the services of such a nurse are not available, an intelligent, well-balanced lay person may be inducted into service, provided that she is willing to do what she is told to do, and no more—the so-called practical nurse, generally speaking, is an abomination, only the rare exception should be entrusted with responsibility.

Nature interposes the vernix caseosa as a barrier against infection, and in the vast majority of cases her efforts are so effectual that no injury results to eyes thus protected. Either dystocia or undue manipulation during partus or post-partum may thwart her efforts. A frequent added source of post-partum infection is the entrance of polluted water into the eyes during the first infantile ablution. Immediately after birth, the vernix caseosa should be removed with sterile gauze from the eyelids and the area immediately surrounding the orbit. The thumb and the index finger of the left hand of the physicians separate the lids, his right hand instills one drop of argentum nitricum two per cent. sol., or argyrol ten per cent. sol.—personally I prefer the argyrol solution. The solutions must be *freshly prepared* with sterile, distilled water. The dropper must be sterile and must not touch the surface under treatment. Next, the child is thoroughly cleansed. Instructions to take care that no water may enter the eyes must not be considered out of place. The toilet completed, thoroughly irrigate the eyes with acidum boricum, two per cent. sol., being careful that the outflowing solution does not come

in contact with the other eye. Daily, for five days, continue the last named irrigation.

Should, in spite of the treatment, the first symptoms of conjunctivitis present themselves on the third or fourth day, at once institute active treatment. The services of a trained nurse are now imperatively necessary. The eyes must be irrigated every hour, day and night, with acetic two per cent. sol., so as to keep the accumulation of secretions down to a minimum quantity. Especially constructed irrigators, armed with duckbill tips, which may be introduced between the bulbus and palpebra, are of great help. In lieu thereof, the cutis of the lid may be grasped between the thumb and index-finger of the left hand, so as to lift the lid from the eye. Only warm solutions must be employed. Every twelve hours the physician himself must thoroughly irrigate the conjunctival sac with hydrargyrum oxycyanatum 0.1, aquae destillatae 300.0.

Cases treated by me, as outlined, have fully recovered with normal vision and without involvement of the cornea.

At the first appearance of iritis, atropine sulphate, one per cent. solution, one drop at intervals sufficient to keep the iris dilated, must be employed to prevent posterior synechia.

7 EAST McMILLAN ST.

PROPAGANDA FOR REFORM

Modified Salicylic Acid and Samarin—In general the pharmaceuticals of Frank S. Betz Co., Hammond, Ind., are non-secret in composition. However, Modified Salicylic Acid and Samarin are described in the Betz catalogue without information concerning their composition. In view of this and because the claims made for them seemed questionable, the A. M. A. Chemical Laboratory analyzed these preparations. Both of these preparations are marketed in the form of tablets. Each tablet of Modified Salicylic Acid was found to contain approximately 4.8 grains acetylsalicylic acid and about 0.5 grain each of gypsum and starch, with a trace of talc. Each Samarin tablet was found to contain about two grains acetanilid and nearly 1.5 grain salicylic acid, probably in the form of calcium salicylate. The tablets were uncoated and colored green throughout, and the acetanilid was not declared on the label as is required by law (Jour. A. M. A., March 26, 1921, p. 883).

Manganese—Investigations of Reiman and Minot demonstrate that ores containing manganese as oxids and silicates are soluble in gastric juice; that manganese is absorbed in the blood stream and again eliminated quickly; and that even prolonged feeding of large amounts of manganese ore to dogs failed to produce significant changes in the manganese content of the blood and tissues or to cause any pathologic (Jour. A. M. A., March 26, 1921, p. 867).

Nasal Deformities of the Developmental Type*

Myron Metzenbaum, M.D., F.A.C.S., Cleveland

Editor's Note.—Dystocia, prolonged labors and forceps delivery accounts for a certain proportion of infantile distortions of the head and face, which do not return to normal contours and usually are exaggerated by maldevelopments, associated with nasal occlusion and mouth breathing. Such deformities should be corrected as early as possible by the removal of adenoids and tonsils, orthodontic restoration of the palatal arch, alveolar curve and by such additional nasal surgery as may be necessary to permit proper breathing. A patient, such as shown in the illustrative case, should never be allowed to reach adolescence without remedied treatment.

NASAL deformities may be divided into three classes:

- I. Case of the Development Type.
- II. Case Due to Disease.
- III. Cases which are Post-Natal Traumatic.

This paper deals only with *nasal deformities of the developmental type*, which includes all cases occurring from infancy to about the fourteenth year, that is during the period of active growth of the facial and nasal bones. It does not include cases due to disease or to visible or known traumatism. Some cases may be due to faulty development of the skull *in utero* just as there is faulty development of other bony structures.

FACTORS IN ASYMMETRICAL DEFORMITIES

Owing to the conformation of the pelvis itself, the pelvic outlet and the application of forceps, some infants are born with distorted heads and faces, which usually round out within one or two weeks. In the exceptional case an asymmetry of the face remains. The jaws may be narrow, the arch of the hard palate high or Gothic, the upper jaw is tilted forward, other parts of face remaining in a posterior plane, the infant breathes with open mouth and nurses with difficulty.

In many cases the infant's head seems well rounded and symmetrical. It is only after months or years that differences in similar parts of the forehead, nose and jaws develop or become more readily recognizable.

Whether the asymmetry exists at birth or develops in early childhood it may be the result of one of the three following causes: (1) a local malnutrition due to an interference of the blood supply; 2) a pathological condition due to an injury to the growing centers, or (3) a subluxation or twisting out of alignment of the nasal and facial bones.

If the arch of the upper jaw remains high, the distance between the two fixed points, namely the floor of the nose and the base of the skull, will be relatively shortened. The septum which is the weakest structure of the face composed of the perpendicular plates of the ethmoid and vomer and the triangular cartilage may attain its full normal growth, but lacking the necessary distance between the base of the skull and the floor

of the nose there may result, *first* a buckling or dislocation of the triangular cartilage, deviating the flexible portion of the nose, *second* a separation of the three portions of the septum at their union producing a typical spur often large enough to wedge into the inferior turbinate and be a factor in the deviation of the nose to the opposite side.

The question is, can anything be done to modify the degree of external nasal deformity and internal septal deviation?

TREATMENT

The removal of the adenoid mass in the infant, and the tonsils and adenoids in young children improves the nasal breathing, also the ventilation, drainage and circulation of the entire nasopharyngeal track, and permits of a freer action of the nasal and pharyngeal muscles on their bony attachments; this muscular action is a strong factor in the normal development of the nasal and facial bones.

If the infant or child is obliged to keep its mouth partially open, the tongue will lie flably on the floor of the mouth. After the removal of the adenoids and tonsils, nasal breathing is made possible, the lips close more readily, the tongue can then take its position between the arches of the lower or upper jaws. The force of the tongue is one of the natural orthodontic factors in widening and developing the arch of the upper jaw so that the septum may have the proper distance for its normal development. If the jaws are not symmetrical and do not close harmoniously then orthodontic procedures should be considered as early as the fifth to the sixth year, for the proper occlusion of the two jaws promotes natural development of the facial bones, which in turn means a natural development of the nasal bones and nasal septum. The combination of all these procedures if undertaken in early life will aid towards the normal development of the jaws, teeth and nose.

ILLUSTRATIVE CASE

The photograph is of a man aged 25, illustrating a case of the Developmental Type.

Cast I shows an exceedingly narrow arch and relatively a very high arch, the teeth lacked the necessary space for regular development. The curved line around Cast I was calculated by Dr.

*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association during the Seventy-Fourth Annual Meeting, Toledo, 1920.



Figure 1.—Illustrative case of deviation due to irregular development.

Varney Barnes of Cleveland, orthodontist, from certain basic measurements of the patient's teeth and indicates the smallest arch into which these teeth can fit regularly.

Cast II is the normal arch of a man with the same basic measurements and illustrates what should have been the arch of this man as shown in *Cast I*. This very high arch pushed up the floor of the nose and shortened the septal distance between the raised floor and the fixed base of the skull. The triangular cartilage sprung out of its groove in the vomer buckling in both nares and forming a long ridge along the floor of the left nares; the anterior cartilage was dislocated partially closing the opening of the left nares. The perpendicular plate of vomer sprung out of its groove and twisted the nose from the end of the nasal bones towards the right. At the union of the perpendicular plates of the ethmoid and vomer and the triangular cartilage a dislocation occurred owing to the lack of the necessary distance to permit these three portions of the septum to develop in a straight plane. At the point of dislocation of these three portions of the sep-

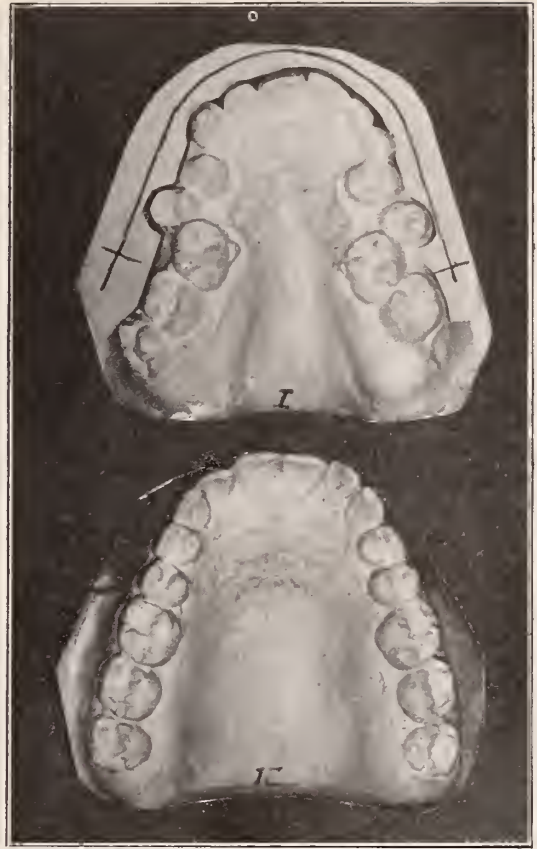


Figure 2.—(I) Cast of illustrative case showing developmental irregularity and exceedingly high arch. Outside line is theoretical arch. (II) Arch measuring to normal.

tum a spur was formed. The entire result was a partial occlusion of both nares with a twisting of the nose itself towards the left. The adenoids were exceedingly large and the tonsils massive.

In early childhood the vicious circle could have been broken; *first* by removing the adenoids in early infancy; *second* the removal of the tonsils at the age of two or three years, thereby improving nasal breathing and ventilation before the nares were occluded or the nose twisted. The improved breathing would have permitted a better closure of the mouth aiding towards normal development. At the fifth or the sixth year in this extreme case the orthodontist might have begun the expansion of the jaws, widening the dental arches and nasal spaces and creating the necessary space for the teeth and tongue. These factors would probably have prevented much of the upward pressure at the crest of the vault and the raising of the vault, which in turn would have given the septum more nearly the necessary space for its normal development without twisting and dislocating and might have prevented the marked nasal occlusion and nasal deformity.

736 ROSE BUILDING.

The Correction of Nasal Deformities with Autogenous Transplants*

James Stotter, M.D., and Arthur L. Stotter, M.D., Cleveland

Editor's Note.—Of all plastic operations the correction of nasal deformities is one of the most popular not only with surgeons but with those who are afflicted with saddle-nose. Fortunately the condition lends itself to correction with very satisfactory cosmetic results. As Drs. Stotter insist, however, a therapeutic result should also be achieved since many of these patients cannot breathe properly and are often subjects of concomitant ear, sinus and pharyngeal symptoms. Surgically an homogenous rib transplant is advisable as well as the double operation at one time.

THE recent war has been the stimulus for plastic surgery so that the majority of surgeons the world over have contributed to this field. Added thereto is the incentive for reconstruction work which has become such an intimate part of our profession since the boys have been returned, and one has a goal long sought in surgery. The ideal reconstruction seeks both a plastic and therapeutic result. The field for this in rhinology is limited; saddle-nose offers the greatest opportunity.

ETIOLOGICAL FACTORS AND SYMPTOMS

The *etiological factors* are: syphilis, tuberculosis, atrophic rhinitis, congenital defects and malformations, submucous operation abscess of the septum, and direct traumatism.

The *symptoms* which the patient presents are both *subjective and objective*. Of the former the patient's personal appearance and his inability to breathe properly cause him to seek relief. There are often the concomitant ear, sinus and pharyngeal symptoms. Upon examination one notes the contour of the nose; the amount of cartilage and bone remaining, its pliability, and the extent of the redundant skin. The interior of the nose presents a swollen mucous membrane quite injected. Very little can be seen beyond the inferior turbinate which impinges as a rule upon a pliable septum. With adrenalin the upper vault is seen to be similarly the seat of a hypertrophic rhinitis. There is little or no air passage.

OPERATIVE OBJECTIVES

We see therefore that the objectives of the operation are twofold: (1) To secure a proper cosmetic result insuring the individual of his aid rather than his detriment to society, and (2) to aid surgically in the reparation of a proper air vault so that the respiratory function of the nose can be continued normally. One of these ends is the aim of every surgical operation in this region, if both can be accomplished we have the ideal result.

OPERATIVE TECHNIQUE

In preparing the field of operation the entire interpapebral area and nose should be scrubbed with soap and water followed by the application of iodine. The eyebrows should be covered with colodion. Cotton pledgets are placed over

the eyes to prevent a conjunctivitis. The surgeon will find that if he stands at the head of the table and the assistant at the patient's right both the rib and the nasal dissection may be carried on simultaneously. The usual "Carter incision" is made between the eyebrows over the nasal bridge down to and through the periosteum of the nasal bone. The skin and redundant tissue is elevated upwards over the frontal ridge and a groove shaped in the frontal bone wherein the end of the transplant will lie. With a pair of scissors constructed with a sharply curved shank a groove is dissected along the median line. Care should be taken to undermine as close to the hard tissues as possible and to remain in the median line as upon this the cosmetic as well as the success of the operation will depend. The dissection should be carried down to the tip of the nose.

At the same time an assistant removes a piece of rib. The size and shape should be determined as definitely as possible previous to the dissection so as to avoid unnecessary handling of the transplant. The incision is made parallel and down to the seventh rib on the right side and carried through the periosteum. A strip is now removed with periosteum intact. If the defect is small mostly cartilage and perichondrium is used, when a larger transplant is desired more bone and little cartilage is used. If required the insert is now properly shaped and then introduced through the incision into the narrow nasal bed filled with blood. Two or three horse hair sutures are used to close the nasal wound. The rib wound is closed by approximating the muscles with catgut and the skin with silk.

The entire nose is now covered with cotton. Bernay's splints are inserted into the previously adrenalinized interior nares. Two strips of card-board wrapped in gauze are held to the external nose by means of a clamp. The writers use a self-retaining nasal speculum. The dressings are held in place by adhesive strips and covered with a gauze roller for the first twenty-four hours. Care should be taken not to injure the eyes with any of the dressings.

ADVANTAGES OF AUTOGENOUS HOMOGENOUS TRANSPLANTS

The advantages of an autogenous homogenous transplant has been demonstrated by Carter, but



Fig. 1 and 2. (a) C. H. W., on April 27, 1920; (b) on September 7, 1920.



Fig. 3 and 4. (a) L. B., on August 7, 1920; (b) on December 1, 1920.

we have found that the great difficulty experienced therewith has been due to the unnecessary handling and exposure to which it is subjected. This can be avoided to a great extent by a simultaneous dissection of the nose and rib. We have had alleviation of all respiratory obstruction within three weeks, for which length of time care has been exercised regarding manipulation of the operated part. X-ray has shown that regeneration and new bone formation is visible from two to four weeks after the operation. Heterogenous transplants such as septal cartilage, tibia, and prothesis in general (paraffine or celluloid) do not give a proper result as they are extruded. By the employment of this method there is very little scar as the incision is small and the dissection subcutaneous.

CASE REPORTS

The following are typical case reports:

CASE 1.—C. H. W., prize fighter, age 20 years. April 27th, 1920. Nose broken by fall as a child and again fractured three years ago while boxing. Can not breathe through nose. (Fig. 1.)

Examination: Septum spread and flaring. Mucous membrane hypertrophied inferior turbinates pressed against septum. Wassermann negative. May 19th, 1920. Plastic operation done and eighth rib from right side transplanted. Sept. 7th, 1920. Result as shown in Fig. 2.

CASE 2.—L. B., laborer, age 22 years. Aug. 7th, 1920. Fell off wagon while in service two years ago, fracturing nasal bone. (Fig. 3.)

Examination: Saddle-nose; septum sharply deviated to right. Hypertrophic rhinitis with little air space. Wassermann negative. August 11th, 1920. Plastic operation, transplanting eighth rib into nose. December 1st, 1920. Result as shown in Fig. 4.

CONCLUSIONS:

1. The ideal surgical result should be both therapeutic and cosmetic.
2. Plastic surgery offers the incentive and correction of saddle-nose, the objective in rhinological surgery.

3. The transplant should be taken from the eighth rib and be homogenous.
4. A simultaneous removal of transplant and its introduction into the field should be attempted.

1148 EUCLID AVE.

The Future of Industrial Medicine In a Labor Policy*

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President, American Association of Industrial Physicians and Surgeons.

Editor's Note.—Universal unrest, verging constantly toward conflict, according to Dr. Geier, characterizes the complex, and as yet unruléd world of industry. The rapid change from the harmonious adjustment of a society consisting of small, self-centered and self-supporting units to the economic and social collisions incident to a society organized on the cosmopolitan interdependence of industrialism calls for a new ethics. A better order can come only by way of the mutual comprehension which evolves out of frequent and familiar contacts. So far, there has been applied to the complex subject of better relations little inquiry and less logic and method. Out of this situation arises the opportunity of the industrial physician to bring together all the major issues of the welfare of the men and to bring to bear on them the proper measures for their early and satisfactory solution.

IF one would adequately discuss the subject, it it would be necessary to define at least the following problems: (1) What is a labor policy and how is one developed? (2) What is the economic and social value of a labor policy in production? (3) To what extent has industry adopted such policies? (4) What is industrial medicine? (5) Does industrial medicine vitalize the development of an efficient labor policy and thus assure its future? The scope of the subject is tremendous and cannot be confined within the period allowed, so we may but undertake to discuss briefly the five queries in the outline.

• When we try to measure the responsibility of industry toward world affairs we recognize that every conscientious person today is giving more serious thought to political and social questions. Never before have economic and social problems carried such national and international importance; never has the world been in such a state of flux; never before have the emotions and aspirations of the various peoples that comprise mankind been so near the boiling point; never before has universal unrest, the new *weltgeist*, shaken the foundations of so many governments. One by one have all our well rooted ideas as to the permanency of many institutions, long believed unshakable, been so forcibly cast into the discard. Nations, political systems, century old economic and political theories and practices have gradually disintegrated before this universal unrest, leaving the world face to face with the necessity of beginning anew to reconstruct our whole thinking processes so that the semblance of order may come out of the chaos.

There exists a smug theory that every great crisis is met by the springing forth of some master minds to grapple successfully with new situa-

tions. If such supermen exist today, they have yet to make themselves known, or perchance their voices are unheard in the turmoil of the mob. If ever we needed statesmanship, it is now, and yet as we daily read the cabled news, we get the impression that nations at large are adrift.

Looming up largely in this international unrest and disorder is an industrial strife in proportions beyond imagination. Just to what extent is industry, with its rather general lack of a labor policy, responsible? Strikes, lock-outs, seizure of plants by the workers, are but signs of a general discontent with the present order of things, which has resulted in general lowering of output everywhere. And this at a time, when mass production is needed, as never before, to rehabilitate the war stricken countries, to feed and clothe millions now underfed, stricken with disease, and almost naked.

This unfortunate outlook is rapidly brought before our minds not to discourage but to stimulate, not to suggest that we be on the lookout for the superman to lead us out of our difficulties, but rather to urge the necessity of each doing his part, each playing his well studied role wisely, to the end that greater sanity and justice again prevail. Governmental regulation and legislation will not prove a cure. World peace and progress will evolve finally of individual right thinking and doing, rather than from old time statesmanship and diplomacy, and of no phase of the world's disorder is this more true than of industry.

It is no pleasant admission, but the leaders of industry have been slow to realize their individual responsibility not only to their own workers, but to the broad social and economic questions of the day. Too many industries have been run by single track minds, conscious only of the possible profits to be made. Such minds give no thought to human factors of management; such minds do

*Read before the Joint Session of the American Association of Industrial Physicians and Surgeons and the Health Section of the National Safety Council, Milwaukee, September 29, 1920. From *Modern Medicine*.

not formulate a labor policy. Only when strikes impend do they give heed to labor relations, and then only to run to cover with other employers for purposes of defense. In brief, these types of business heads lack a constructive policy for industrial peace, and are therefore only blindly prepared for labor's method of warfare.

LABOR AND THE GANG SPIRIT

If, in the past few years, labor has seemingly grasped too much for the general good, we can rightfully blame industry for failing to do its share in keeping the pendulum from swinging too widely. All men are bound to seek leadership. We all respond to the gang spirit from youth on. Organized labor in large part has supplied a certain kind of leadership, and, right or wrong in its tenets, has satisfied the human longing *to belong*, to have something to say, *to do other than merely to earn*, to be recognized as an entity, to find some form of self-expression. In times of strike and industrial strife the worried employer makes a belated effort to assume some leadership, only to find that leadership cannot be superimposed on the group or substituted for that which already exists. Industry does not attempt to build up an effective production organization over night, nor stand ready to change its managers for new ones on short notice. Even more slowly and less kindly do employees take to radical changes in their leadership.

If employers at large are dissatisfied with the character of leadership in the ranks of labor if they would have it less radical, more constructive, they will need to help create a feeling among the average workman that this present leadership is not safe for the general good. To do so the employer will have to become as astute in his appreciation of the psychology of the employee as is the labor leader. To accomplish this difficult task he must first inform himself about the history of the labor movement, its purposes and promises, its methods and results; for then only will he be able to discern its strengths, its weaknesses, and failures, and hold them up to light. Even then he will have no audience to sway, no group to persuade, unless he has proved by past performances that he is just and fair in his dealings with his fellow men and deserving of their confidence and leadership. Primarily, then, the employer must have a labor policy, which is exactly what too few men at the head of industry now have. Too often a blind prejudice against all organized labor is substituted or mistaken for a labor policy.

The very definition of the word policy includes a thoughtful conclusion based on all obtainable facts. In the case of a labor policy the facts must include all the basic principles of social and economic justice that enter into wage relations, necessarily tempered by the varying attitudes of the respective employer and employees. In brief, we have here the most difficult complex study

confronting any human being, one that is never static or complete, but one which needs always to be adjusted and brought up to the moment if it is to remain effective. Each separate industry, more or less affected by the processes and limitations that enter into the product, has its particular labor problems which further extend to this craft of which it is a part, and all these conditions are in turn definitely molded and influenced by the composite will and desire of the labor group and the community at large.

To have a labor policy therefore, that will stand the crucial test, the management must then be willing to put real brains, energy, and heart into the study of its own attitude and personnel, of its employees and their relations to other employees and employers, as well as to the community. Management must possess its soul with patience, with forbearance, for most slowly does this knowledge unfold itself. Much wisdom will come from broad reading, more from the practical results of other similar searchers after economic truths, but the most precise information will come out of the daily organized efforts at better mutual relations. Nothing will avail unless there can be established much ordinary but useful human relationship between the management and the group, and by this very measure will the effort be successful. The employer must learn to talk the language of the workmen, to anticipate their misunderstandings, gracefully to accept their early suspicions in the hope that through frequent contacts, through frank and painstaking exchange of ideas, the usual barriers will finally break down.

INJECT PERSONALITY INTO MANAGEMENT

In a communication recently received from a successful manufacturer, several paragraphs occur which fit into this discussion. Part of his success undoubtedly has been his ability to inject his personality into management all down the line, which finds expression through a well organized personal service department.

He states: "Employers are rapidly learning that it is just as important to have a healthy, happy, well trained, smooth running labor force as it is to have a thoroughly planned, modern building, equipped with highly organized machines made of carefully selected material, honestly and conscientiously put together, each part in thorough alignment and running without friction. We find that a shop force, once made to understand the mutuality between employer and employee, responds to our leadership and cooperates with the management in working out the daily problems of increased production and lowered costs. Industry has discovered that the establishment of a broad labor policy, in all its ramifications, is an applied science, and not a commodity that can be bought and installed in a single day; that it is an important function in management, operating continuously during every work-

ing hour of every day in the year. Only out of such constant effort will there finally result a progressive, permanent labor policy. The greatest success will come if it is begun in a small, simple way, gradually gaining the confidence of the men, each succeeding step making for a better understanding."

He then further emphasizes these points by adding, "None of these things can be substituted for a fair wage, but paying the current rate of wage, as we pay the current price for material, is not sufficient. Labor policies cannot be acquired as readily as material. Workman cannot be graded by exact mechanical or physical analysis as is the case in the purchase of materials. We may employ standards of physical fitness, make use of past records of former employment, establish extensive record systems; but the human equation still remains and the treatment of the human material must differ greatly from the handling of other material."

Finally, this successful business man vitalizes our discussion of today when he says, "The individual who represents the management in his phase of production must approach his work not only with a thorough understanding of the fundamental economic basis on which the human relations department must rest, but he must have, in a very special degree, a sympathy for the innumerable difficulties with which the average workman is confronted, and lend thereto a spirit of helpfulness. Every vestige of paternalism must be eradicated in his daily contact with the men, where he must be unostentatious, evince sympathy and understanding, fair-mindedness, and justice. When management has inaugurated such a department under such wise leadership, the greatest step has been taken for the solution of the age-long 'controversy between capital and labor.' Natural contacts are developed. Each day will bring into the open, for prompt and wise settlement, the many minor differences which too frequently have been kept in the dark, where they have festered and spread their poison, later requiring major operations to effect a radical cure."

If we take these expressions as typical of the minds of the forward-looking leaders in industry, we are face to face with the necessity of promptly providing many highly capable, conscientious individuals to take part in the development of human relations—men who are particularly qualified by character and training to initiate this newer industrial gospel. We may immediately admit that all of these better relations are predicated most successfully upon the better physical and mental health of the individual workers. So it follows that right minded physicians of executive ability, economically and socially minded, may become the very cornerstone of personal service departments.

PHYSICIANS MOLD ATTITUDES

Industry and society need today an ever in-

creasing group of seriously minded, well trained physicians and surgeons who realize the great social and economic contribution that they may make to industry and society by special study of their opportunities to serve both the employer and the employee. In conserving the body and mind of the worker, the industrial physician is able frequently not only to add to the earning capacity of the man, but also to change the worker's attitude towards his job. Incidentally, he educates the employer to the dollar and cents value of individual and community health.

If we but stop for a moment to consider the world wide attitude of the laity towards the medical profession in general, and particularly how the physician is accepted by the industrial worker, not only as a medical adviser, but as friend and counsellor, we may at once perceive how industry, in bringing this new personality into close contact with its workers, provides a point of sympathy and understanding which can be supplied so readily by no one of the other functionary whether he be a highly trained employment manager, a social or welfare worker, or what not. When industry accepts this non-controvertible fact that in the physician and his old time relations with the patient it has a new and definite asset, then will progress in building up personal service departments be made more quickly.

HUMAN CONTACTS IN CLINICS

Who dare deny for a moment that the contacts produced in an industrial clinic under the supervision of a high grade medical officer are the most natural in the world; that here human helpfulness may find its best expression, free from any paternalistic slant, providing a type of service for the worker otherwise unpurchasable, unsecurable? The employee can usually secure for himself almost all of the facilities—recreational or educational—which a well developed human relations department attempts to provide, but the medical guidance is a service in a class by itself.

In establishing a 100 per cent. health department service, industry supplies a type of preventive medicine which was never before conceived by the medical profession, the benefits of which even the comfortably situated and well-to-do do not enjoy. Daily supervision of health, ready accessibility of the patient to the doctor, innumerable opportunities for observation of minor symptoms and conditions, finally build up an entirely new type of preventive medicine which is bound to reflect itself in a lowered sickness rate, and therefore in a lowered death rate.

The thousands upon thousands of contacts that are made each year with the men through the medical and service departments give the employees an appreciation of the purposes and difficulties of management, and on the other hand, give the management an insight into the personal problems that confront the men. It is when this

clear understanding between the two is reached that management becomes fully successful, to the ultimate gain of both employer and employee.

If the physicians connected with industry are to establish a real place for themselves and the new specialty of industrial medicine, they must intensively apply themselves to the work before them. Mere finger wrapping and the giving of gunshot prescriptions or pills inside of a dispensary connected with industry does not qualify a man to state that he is practising industrial medicine. With such professional assistance industry only fools itself in the belief that its medical department is serving the workers. This type of work is worthless to industry and has furnished the labor agitator with ammunition with which to attack the meritorious system of physical examination and medical supervision.

That physician, however, who has the support of the management and who has a broad understanding of the problems of industrial relations, modern employment methods, safety and sanitary requirements of the plant, and who appreciates the relationship between these things and the wage loss due to accident and disease is in position to make a marked contribution to industry and therefore to society.

ADEQUATE PAY FOR SERVICE

This brings us, however, to challenge industry to exercise the same care in selection and show the same willingness to pay an adequate price for properly equipped physicians that they display when hiring other executives for the plant. A cheap doctor, like a cheap manager, spells disaster. Many good physicians are finding their opportunities to serve industry in a big way made impossible by being placed under control of some narrow-gauged safety or employment man whose chief concern is the size of his pay roll. Good preventive health work costs money and, unless the plant physician can sell this idea direct to the management, and from that source receive encouragement for further effort, he will soon degenerate into the routine finger-wrapper and pill vendor previously mentioned.

We submit, then, for final and thoughtful consideration:

- (1) That production is fatally low.
- (2) That unrest is universal.
- (3) That industrial discontent is extensive.
- (4) That general unrest and industrial discontent will be cured not by legislation, but chiefly by the collective result of intense individual effort, each employer working out the problems in his own plant.
- (5) That the general lack of a labor policy has contributed not a little to these conditions.
- (6) That the acquirement of an effective labor policy is a man-size job, extending over years.
- (7) That a constructive policy will heavily stress the value of health in the worker.
- (8) That physicians giving their whole thought

and energies to industry are an important factor in labor relations.

(9) That industry's power for social and economic good or evil is unmeasurable. It can and must solve its problems of labor relations. It can and should set new standards of health control.

SOCIETY ORGANIZED ABOUT INDUSTRY

If industry knew how largely it dominates life at large; if it really sensed the tremendous responsibility it bears towards society; if it could be made to see how our whole commercial, social, and economic existence is finally and absolutely dependent upon its actions; if its leaders would realize that the force and character of industrial life pulsates throughout the community, making for good or bad citizenship, for unhappy, restricted existence or for healthy, contented, constructive living; if these leaders could know to what extent good human relations in one plant leavens and makes safer the body politic, then in truth would they wield that power more largely for the common good.

The power of kings is as nothing compared to the collective power of industry when working for society's welfare. Massed within its walls are great units of society whose quality of citizenship will finally be the measure of the success of democracy. The ultimate fruit of industry is not to be looked for in its products but its real result will ever be either a discontented, unhealthy, apathetic, thriftless community, or it will be an energetic, successful, growing community, vibrant with good health and happiness, producing most per hour of employment, and adding steadily to its wealth.

Which shall be the choice? Upon the answer depends the future place in history of our industrial national life.

NEW AND NON-OFFICIAL REMEDIES

Arsphenamine-Squibb.—A brand of arsphenamine N. N. R. (See New and Non-Official Remedies, 1921, p. 41.) Arsphenamine-Squibb is marketed in ampules containing, respectively, 0.1 gm., 0.2 gm., 0.3 gm., 0.4 gm., 0.5 gm., 0.6 gm. Arsphenamine. E. R. Squibb & Sons, New York.

Neoarsphenamine-Squibb.—A brand of neoarsphenamine N. N. R. (see New and Non-official Remedies, 1921, p. 45). Neoarsphenamine-Squibb is marketed in ampules containing, respectively, 0.15 gm., 0.3 gm., 0.45 gm., 0.6 gm., 0.75 gm., 0.9 gm. neoarsphenamine.

Sodium Arsphenamine-Squibb.—A brand of sodium arsphenamine N. N. R. (see New and Non-official Remedies, 1921, p. 48). Sodium arsphenamine-Squibb is marketed in ampules containing, respectively, 0.15 gm., 0.3 gm., 0.45 gm., 0.6 gm., 0.75 gm., 0.9 gm. sodium Arsphenamine. E. R. Squibb & Sons, New York. (*Jour. A.M.A.*, April 9, p. 1007).

Primary and Secondary Nitrous Oxide Saturation for Relaxation and As a Test of the Patient's Capacity for Operation*

E. I. McKesson, M.D., Toledo

Editor's Note.—One of the drawbacks to the routine use of nitrous oxide-oxygen anaesthesia has been a lack of knowledge and a perfected technique for securing relaxation without the use of lipoid solvent anaesthetics. After an intensive experimental and clinical research into this problem Dr. E. I. McKesson has found its solution in primary and secondary saturation. This obviates the necessity for synergists and preserves the ideal character of pure nitrous oxide-oxygen anaesthesia. In developing this technique Dr. McKesson found later on that it could be used to test the patient's capacity for operation and serve a useful purpose in finally determining whether or not certain dubious risks were operable or not. This test is based on the blood pressure reactions of hazardous risks to primary and secondary saturation. The Anaesthesia Record included in Dr. McKesson's paper is one he helped formulate for the safety-first movement of the National Anaesthesia Research Society, and is based on the recommendations for such a record suggested by Dr. W. W. Keen. Some 50,000 have already been distributed to secure tabulated results of series of cases.

GENERAL CONSIDERATIONS

IN the primary, or induction, stage of nitrous oxide-oxygen anaesthesia, it is the usual practice to administer 100 per cent. nitrous oxide to produce unconsciousness as soon as possible by a primary saturation of the blood with the anaesthetic gas. Very soon, however, a small amount of oxygen must be mixed with the nitrous oxide to prevent the jactitations and other manifestations of acute anoxaemia. Now, if some fixed proportion of oxygen is decided upon it will be found too small for some and too great for others, since patients differ in their mixture requirements. All of this is well known to gas-oxygen users. Preliminary or what may be called primary saturation with nitrous oxide is about as far as many gas-oxygen anaesthetics are carried. If the operation requires deeper relaxation it is the practice of many anaesthetists to resort either to a mixed gas-oxygen-ether, or to an ether sequence.

In a primary saturation only the actively circulating blood is saturated before oxygen must be administered. There remains in the muscles, and in all other tissues, considerable volumes of nitrogen and oxygen, which, in the early minutes of narcosis, enter the blood stream and dilute the nitrous oxide, thereby preventing deeper anaesthesia. In order to displace more of the non-anaesthetic gases in the body with nitrous oxide, the technique to be described as secondary saturation has been devised.

Any general anaesthetic relaxes muscle, providing some coincident by-product or effect does not counteract this function.

In nitrous oxide anaesthesia we may have sufficient anoxaemia to produce muscular spasm when there would have been relaxation had the anoxaemia been prevented. Yet by the usual technique it has not always been possible to pre-

vent the anoxaemia and still have sufficient nitrous oxide concentration to relax the patient.

CLINICAL OBSERVATIONS

Eleven or twelve years ago, in my early experience with gas-oxygen, occasionally patients were accidentally overdosed with nitrous oxide, stopping respiration and requiring resuscitation with oxygen. I was impressed with the extreme ease and quickness of the restoration by inflating the lungs once or twice with oxygen. The phenomenon was so unusual when compared with the difficulties which followed overdosage with ether or chloroform that it made a profound impression.

In attempts to secure deep anaesthesia and muscular relaxation these observations became more commonplace and it was soon learned that cyanosis, a dilated pupil, and apnoea were easily corrected by inflating the lungs once or twice with oxygen, and that while these signs could not be disregarded nor neglected for a moment when they became apparent, nevertheless, the patient was in no serious danger if oxygen could be put into the lungs after saturation had thus occurred.

Another phenomenon was observed in this connection which has since been a most important means of securing a flacid abdominal wall. When fully utilized it has made it possible to obtain for the patient the full advantage of a pure gas-oxygen anaesthesia, and to eliminate the unpleasant sequelae which even a small amount of ether produces. The phenomenon was this: When the patient had been reoxygenated after saturation, complete muscular relaxation followed, and a patient who, prior to that time had been too rigid for easy abdominal exploration became ideal from the surgeon's point of view.

At first the fear of accident prevented the intentional utilization of this procedure in clinical practice and only in unintentional overdosing were further observations made. The patients were studied from many angles, careful records of pulse, respiration, blood pressures, pulmonary ventilation, rebreathing, and the mixture of gas-

*Read during the Sixth Annual Meeting of the Interstate Association of Anesthetists, in Joint Session with the Medical Society of the State of Pennsylvania, the Western Pennsylvania Odontological Society and the National Anaesthesia Research Society. Awarded one of the National Anaesthesia Research Society's first prizes for meritorious research.

oxygen were tabulated on every patient during the narcosis, that an opportunity to study a case when one presented might not be lost.

These clinical observations of blood pressures unexpectedly exploded the theory that gas-oxygen elevated the blood pressure and, therefore, the danger from this factor was eliminated as early as 1911 and reported.

After three or four years observations of these occasional cases the conclusion was reached, that a patient might be crowded to the limit of saturation without great danger if oxygen could then be instantly forced into the lungs. The method was tried in those cases at first, in which ether was clearly contraindicated and in whom sufficient relaxation by the usual technique for pure gas-oxygen was not readily obtainable. Gradually its use has been extended to include any case in which relaxation of abdominal muscles is desired.

Many times the patient has been brought from what appears to be a well developed fourth stage with widely dilated fixed pupils, and deepest cyanosis, complete spastic apnoea, and general board-like rigidity, into a most beautiful placid relaxed pink patient in from ten to twenty seconds, with every appearance of normal slumber.

While this illustrates the remarkable flexibility of nitrous oxide and oxygen and its wonderful safety, it also illustrates the important clinical fact that a patient may be more completely saturated with nitrous oxide than has been generally practiced or thought possible.

THE PRINCIPLE OF NITROUS OXIDE SATURATION

The principle of nitrous oxide saturation is not radically different from ether or chloroform saturation. It requires, of course, a much higher concentration for a few moments than is required with the latter agents, and to secure this concentration, oxygen is temporarily cut off or markedly reduced below the proportion which will be administered after the saturation has been accomplished.

In most gas-oxygen anaesthesias as given in the past, the patients have been only partly saturated, and reflexes or rigid muscles resulted just as occurs under light anaesthesia with ether, chloroform, or other general anesthetics.

The extraction specialists of years ago and today produce primary saturation and approach secondary saturation in many of their muscular patients before beginning to extract teeth. Had they required the relaxation needed in abdominal surgery, and possessed the means for using oxygen which we have, the technique for secondary saturation, no doubt would have been developed by them, because they were not afraid of cyanosis, which is the stumbling block in the minds of ether or chloroform trained anaesthetists and surgeons. The extractionist soon learns that nitrous oxide (without oxygen) usually pro-

duces anaesthesia slightly later than the onset of cyanosis and he, therefore, rarely removes the inhaler until his patient is fairly blue. Yet under such a technique with all sorts of patients he has established a record for safety with nitrous oxide which has not been approached by any other anaesthetic agent.

The fear of cyanosis by the surgeon and anaesthetist has been one of the most powerful influences in holding back the progress of nitrous oxide and oxygen. It is the most natural thing to administer oxygen when the skin becomes dusky, and stop the further development of narcosis by so doing. General ignorance concerning the significance of cyanosis itself and how much cyanosis from a certain cause will be tolerated for certain periods of time, are subjects worthy of investigation. Cyanosis as a sign indicating the depth of anaesthesia, is not only absolutely valueless but misleading and dangerous because one patient may be cyanotic and still conscious, while another may be pink, overdosed and dying from the same mixture of nitrous oxide and oxygen.

ILLUSTRATIVE CASE REPORT

The following unusual and remarkable case in my recent experience illustrates: Mrs. C., a middle aged woman had twelve infected teeth to be removed. She had had four or five blood transfusions, one recently, for an anaemia of four years' standing. The haemoglobin index was 27 cent. and the red cell count 1,250,000,000. She was excitable, weak, and spent much of her time in bed. Nitrous oxide-oxygen was selected by the consultants as the safest anaesthetic for this patient. The usual technique of induction with 100 per cent. nitrous oxide was begun, January 5th, 1920, but at the end of the third inhalation while the ear and nails were distinctly pink (they had been previously quite pale) respiration stopped, the eyelids opened, and the pupils had dilated until only a narrow ring of iris could be seen. The muscles were completely relaxed in every part of the body. The pulse was weak but regular and easily felt.

The lungs were promptly inflated or about half filled with oxygen twice, and within ten seconds the iris began to retract and within a few more seconds respirations resumed regularly.

On account of the few breaths required to thus overdose the patient, it was evident that the nitrous oxide would need to be highly diluted with oxygen to prevent a recurrence and, therefore, the apparatus was set for 30 per cent. oxygen and only 70 per cent. nitrous oxide. But the same signs recurred within five or six breaths, and again she was resuscitated with two inflations of oxygen. Now, 50 per cent. oxygen and 50 per cent. nitrous oxide were administered and after several breaths the pupils began to slowly dilate and respirations became weaker. After a breath of 100 per cent. oxygen was ad-

ministered, to prevent the further development of overdosage, 40 per cent. nitrous oxide was next tried with 60 per cent. oxygen. This proved to be the ideal mixture for the patient and no further difficulty was experienced, while the operation proceeded.

The operation lasted twenty minutes in which the teeth were removed, the alveolar process trimmed smooth with rongeurs, the gum margin trimmed and sutured so as to restore mastication by artificial dentures within a few days.

Semi-consciousness following the operation lasted for thirty minutes (instead of a few seconds) which was no doubt due to her unusually weak condition and to her anaemia. There has been a gradual improvement in the general condition of the patient up to the present time.

Besides illustrating the fact that a patient may be overdosed with very low percentage of nitrous oxide without showing cyanosis, this extreme case emphasizes the importance of the true signs of anaesthesia as a guide to the anaesthetist, and the necessity for being prepared to resuscitate a patient when respirations are accidentally stopped by over-saturation with nitrous oxide, regardless of the proportion of oxygen which may have been used up to this time. Another unusual but expected phenomenon occurred in this case:—the moment when overdosage occurred each time, as well as at other times, there was no muscular rigidity, but extreme relaxation instead. This was due to the fact that we had the nitrous oxide in sufficient concentration to produce relaxation and also enough oxygen to prevent anoxaemic spasticity. At no time was there anoxaemia or cyanosis to produce spasticity. In the usual case when saturation is first attained the coincident anoxaemia causes the muscles to become board-like or spastic, but relaxation comes promptly when sufficient oxygen is restored to them.

PRIMARY AND SECONDARY CYANOSIS

Cyanosis may be classified as primary and secondary; primary due to changes in the blood itself, and secondary due to local or external causes capable of increasing the oxygen depletion of the blood. Cyanosis is due to the deoxidation of oxyhaemoglobin to reduced haemoglobin, it is a physiological process carried beyond the usual limits.

Blood usually leaves the lungs about 95 per cent. saturated with oxygen, therefore having only 5 per cent. unsaturated. There will be a larger portion of it unsaturated if aeration is interfered with by inspired mucus, by blood, a restricted airway, or by a reduction of the oxygen administered as in anaesthesia.

That cyanosis *per se* is not incompatible with life is illustrated in morbus caeruleus, aviation, pneumonia, and in bathers exposed to cold air.

In old age when metabolism is lower, less oxygen is consumed in the tissues, and less cyanosis results from oxygen restriction. The old folks

are usually ideal patients for gas-oxygen, easily handled and rarely requiring secondary saturation to produce relaxation. The young adult on a similar oxygen percentage in the anaesthetic mixture usually shows a greater unsaturation and more cyanosis.

The rate of flow of the blood may be altered so as to increase unsaturation or cyanosis in terminal toxæmias such as in peritonitis or endocarditis, or again from a deficient septum between the ventricles.

Then the blood itself greatly influences cyanosis. The anaemic patient in a given mixture of nitrous oxide and oxygen, producing normal anaesthesia, obtains enough oxygen to oxidize the small quantity of haemoglobin she carries, while the full blooded drayman on the same mixture would probably be cyanotic because the oxygen would be sufficient only to oxidize 50 to 75 per cent. of his haemoglobin.

In well marked anaemia with less than a 50 per cent. haemoglobin index, cyanosis is rarely seen; with an index of 30 per cent. or less cyanosis cannot be produced before death.

It is, therefore, obvious that the fear of cyanosis is sometimes well founded and at other times unwarranted. Its absence, however, is not a sign of safety nor its presence a danger signal.

Under ether or chloroform, cyanosis is usually of serious omen—an indication of serious heart embarrassment, or restricted respiration from over-dosage. It is not usually due to restriction of oxygen administered or inhaled.

In thousands of administrations degrees of cyanosis have been produced for variable lengths of time under nitrous oxide with no ill effects, which, if seen under chloroform or ether, would, in a fair percentage of cases, result fatally. *The difference is in the cause.*

In operative cases one must be able to determine the cause of cyanosis, if it occurs, and whether it is controllable or not, before concluding that it is detrimental. Some patients will tolerate quite deep cyanosis for a few minutes, a moderate amount for hours and a slight cyanosis for long periods if due merely to a restriction of oxygen administered to the lungs for absorption.

THE SIGNS OF ANAESTHESIA

The only true signs of anaesthesia clinically, which are of value, are those manifested through the patient's muscular system. Movement, or its absence is significant. In the accompanying table, color is tabulated principally to show its uselessness as a guide to counteract the often repeated statements in anaesthetic literature regarding its supposed value.

The third stage of anaesthesia as described in the text-books, is here divided into three planes: *light, normal, and profound*. The third plane or profound anaesthesia, borders upon the fourth stage and merges into it with the (d) group of signs. The signs of the third plane are the

LIGHT ANAESTHESIA Due to too much oxygen in the mixture.	NORMAL ANAESTHESIA Due to a properly balanced mixture of N ₂ O-O.	PROFOUND ANAESTHESIA Due to too much N ₂ O in the mixture or to partial obstruction of respiratory passages.
RESPIRATION (a) Superficial slow breathing usually regular. (b) Prolonged inspiration. (c) Phonation due to reflexes or pain. (d) Holding breath, grunting.	RESPIRATION (a) Full "machine like" respirations. Regular and faster than normal. (b) Inspiration and expiration nearly equal. (c) No phonation. (d) Continuous uninterrupted respiration.	RESPIRATION (a) Irregular rhythm (sobby) usually slower than normal. Spasmodic. (b) Prolonged expiration. (c) Phonation due to muscular spasm of vocal cords. Often crowing. (d) Cessation of respiration from spasm of muscles of exhalation.
MUSCULAR PHENOMENA (a) Movements or rigid muscles. (b) Facial expression of pain or consciousness. (c) Nausea, very rarely. (d) Reflex, or voluntary resistance.	MUSCULAR PHENOMENA (a) Immobile and relaxed, but having normal muscular tonus. (b) Expression of normal sleep. (c) Quiet. (d) Quiet. Relaxed.	MUSCULAR PHENOMENA (a) Clonic movements, twitching or jerking in early minutes of induction, often start in upper eyelids. (b) Expression wild looking. (c) Swallowing, retching or vomiting, common. (d) Tetanic, spasm, marked rigidity—opisthotonus in some cases.
THE EYE (a) Pupils large, contract to light actively. (b) Conjunctive sensitive. (c) Eyeballs roll. (d) Eyelids resist opening, winks when touched.	THE EYE (a) Pupils small or medium fixed. (b) Conjunctive insensitive to touch. (c) Eyeballs fixed or slowly roll. (d) Lids often slightly open, relaxed, no winking.	THE EYE (a) Pupils fixed, enlarge progressively and finally become irregular in shape. (b) Conjunctive insensitive. (c) Eyeballs fixed in some position or jerk. (d) Eyelids stiff. Often wide open.
COLOR OF SKIN (a) Pink or no change normally. (b) In anæmics, no color change. (c) In plethorics, slight cyanosis.	COLOR OF SKIN (a) Varies from pink to decided cyanotic tint. (b) In anæmics, no color change. (c) In plethorics, considerable cyanosis.	COLOR OF SKIN (a) Usually cyanotic. (b) In anæmics, slight flushing, rarely cyanosis. (c) In plethorics, almost black.
REMEDY Decrease the percentage of oxygen in the mixture.		REMEDY Increase oxygen in the mixture or in (d) inflate lungs with pure oxygen 1 to 3 times.

guides to secondary saturation, as well as the limits of anoxaemia, which are momentarily permissible in producing secondary saturation.

THE TECHNIQUE OF USUAL INDUCTION, OR PRIMARY SATURATION

Anaesthesia is induced by administering 100 per cent. nitrous oxide until the first muscular phenomenon of oxygen hunger is observed. This may be and usually is characterized by a change in character or rate of respiration accompanied by a little snore, a twitch of the eyelid, a jerk of the hand or foot, or some similar anoxæmic muscular contraction, clonic in character.

This is the patient's first signal for oxygen, and marks the moment when oxygen should be added to the nitrous oxide in sufficient proportions or percentage to prevent, temporarily, the fur-

ther development of anoxæmia. What this percentage of oxygen shall be is determined by the susceptibility of the patient, which is roughly determined by the length of time or the number of breaths of pure nitrous oxide which the patient has inhaled, before anoxæmia develops. If short, the percentage of oxygen may be greater than if anoxæmia comes on slowly. But in the usual case, with the first anoxæmic sign, 5 to 6 per cent. oxygen is then mixed with the nitrous oxide, increasing or diminishing it as the signs of anaesthesia may indicate while attempting to attain the normal plane of anaesthesia. Thus, the first two or three minutes of narcosis will pass before it will be determined whether the normal plane can be secured without secondary saturation or not, whether it will be necessary to further saturate with nitrous oxide in order to rob the

tissues of their excess of oxygen and nitrogen, and thus prepare for muscular relaxation by increasing the amount of nitrous oxide in the body.

TECHNIQUE OF SECONDARY SATURATION

If relaxation has not taken place when other signs indicate that the patient is in normal anaesthesia and if relaxation is essential to the success of the operation, see that plenty of oxygen is available, and know by previous trial upon yourself that the apparatus will actually inflate* the lungs with pure oxygen, then proceed to secondary saturation as follows:

A. Deoxygenation. Reduce the proportion of oxygen or administer 100 per cent. nitrous oxide until the pupils dilate (beware of glass eyes and adherent iris), tonic muscular spasm or rigidity develops, respiration becomes slow or stops. These are the signs of the profound plane of anaesthesia.

B. Reoxygenation. Then administer one breath of 75 to 100 per cent. oxygen, if the patient inhales, if he does not, partly fill the lungs by inflating with pure oxygen once or twice—usually once is sufficient. The cyanotic color now begins to lighten, if present, the pupils retract, the pulse is normal or slower than before, the muscles become perfectly relaxed and respirations resume.

If care is taken not to administer too much oxygen or too many breaths of oxygen, which will in itself desaturate, the period of relaxation may last throughout the operation, or it may be necessary to resaturate if air leaks into the respiratory channels of the apparatus, and thus displaces the nitrous oxide with an excess of nitrogen and oxygen.

There are good reasons for believing that air is slowly but sufficiently absorbed through the skin and open abdomen to destroy the nitrous oxide saturation, in some cases, necessitating resaturation at the time of closing the abdominal wound. At this time another advantage may be taken of the procedure to immobilize the abdomen for a few seconds while closing the peritoneum.

After reoxygenation of secondary saturation is begun there are from 5 to 20 seconds when the patient does not breathe because of the excess of oxygen in the blood and brain, and if this phase of secondary saturation is properly timed it not only gives the surgeon a perfectly flaccid abdominal wall, but also a quiet peritoneum to sew.

TEST FOR PATIENT'S CAPACITY FOR OPERATION

We are occasionally asked to anaesthetize patients who may be regarded generally as inoperable. Without the operation death may

be inevitable and with it, *probable*. If the patient is unable to withstand the burden of beginning narcosis, the operation ordinarily must be abandoned forthwith. But how may we more surely determine that the patient will succumb during or immediately after the operation? How can we avoid the hopeless cases, without abandoning any who might be cured? The answer to these questions is difficult and depends upon many factors beside the resistance of the patient:—Duration and character of operation; the surgeon, the anaesthetist, the anaesthetic, and the use of other agents calculated to prolong life. It is a delicate situation in which any one member in the team may cause disaster on the table; and in which the most intelligent co-operation of all may not avoid it.

You cannot tell by the looks of a frog how far he can jump, nor will mere inspection, however valuable, give more than a vague prognosis.

The pulse may not be extreme in rate and the blood pressure may be shamming. The real question is, how much reserve have we to draw upon, or will a slight interference break the delicate balance of pulse, blood pressure, and respiratory relations, and initiate an immediate demise?

ILLUSTRATIVE CASE

Several years ago I was called into the country to anaesthetize a farmer who had had a strangulated hernia for several days, and was apparently very near death. After carrying him from the bed to the kitchen table he had to be resuscitated with oxygen. I did a primary saturation with gas-oxygen and was compelled to again resuscitate with oxygen, which was easily accomplished. The surgeon then suggested that we try ether on the supposition that ether is a stimulant even in anaesthetic dosage. A few drops were administered and after fifteen minutes' work with oxygen the patient was sufficiently resuscitated to be put to bed without the operation. The patient died four hours later. We concluded that this patient was inoperable.

BLOOD PRESSURE GUIDES

In presenting the value of "Blood Pressure Guides in Operation and Surgical Prognosis," A. H. Miller, of Providence, R. I., emphasized the value of Moots' Rule for determining the index of the patient's resistance. This rule may be thus stated:

The pressure ratio, a fraction having the pulse pressure as numerator and the diastolic pressure as denominator, may be normal between 40 and 60 per cent. If the ratio lies between 25 and 75 per cent. the case is probably operable; if outside these limits it is probably inoperable.

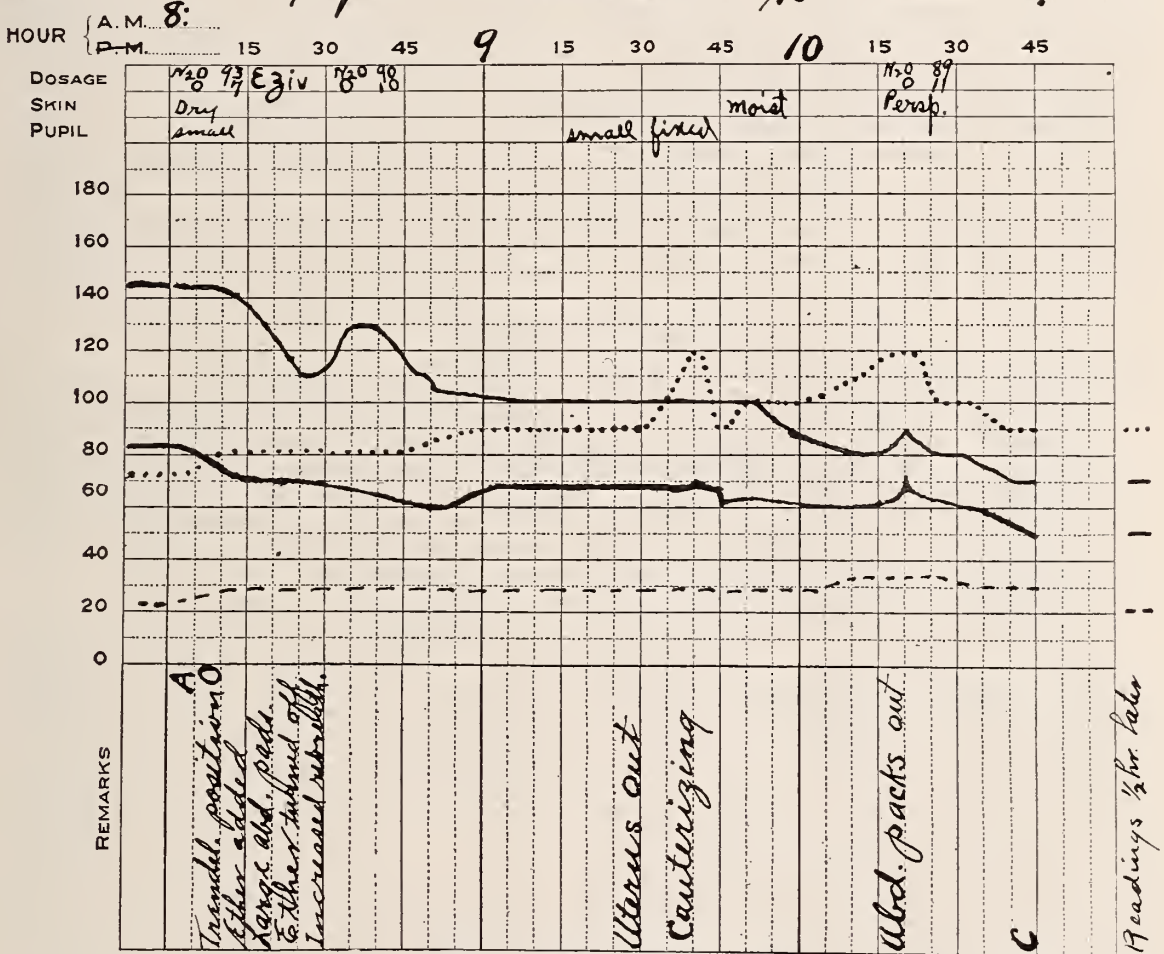
In checking up the accuracy of this rule in a series of 1,000 cases, Miller found that in the operable risks 3.23 per cent. of the patients died and 96.7 per cent. recovered; in the inoperable risks 23.07 per cent. of the patients died and 76.93 per cent. recovered.

*Note:—Secondary saturation would be a dangerous procedure if attempted without an apparatus capable of artificial respiration with oxygen being a part of the anaesthetic appliance.

ANAESTHESIA RECORD

Flower Hospital *Cleveland* City *Ohio* State
 No. *210* WARD *C* DATE *9/10 - 1920*
 NAME *Sarah Jones* AGE *60*
 OPERATION PROPOSED *Wertheim operation for Carcinoma ut.*
 PHYSICAL FINDINGS NORMAL EXCEPT *Surgical condition*

PRELIMINARY HYPNOTIC *Morphine & Hyoscin* DOSE *1/6 - 1/50* TIME OF ADMIN. *7 AM*



ANESTHETIC *Nitrous Oxid-Ox - Ether* TECHNIC *Combined* AMOUNT *E3iv*
 SURGEON *C.W. Smith* ANESTHETIST *A.L. Brown*
 OPERATION *Wertheim operation for Carcinoma uterus*

REGAINED CONSCIOUSNESS AT *10:55 AM* O'CLOCK

Satisfactory narcosis

CONVALESCENCE NORMAL EXCEPT FOR

VOMITING { NONE ☒ SLIGHT ☐ EXCESSIVE ☐

CIRC. DEPRESSION { 1ST ☒ 2ND ☐ 3RD ☐ SHOCK

For determining the presence of operative shock under anaesthesia a rule formulated from my own experience is an important guide. It is thus stated:

With a pulse rate of 120 or more, a pulse pressure of 20 mm. or less, and a diastolic pressure of 80 mm. or less in a patient, who at the beginning of the operation, had presented normal pressure, frank shock had occurred. If these low pressures are continued without improvement for more than half an hour, a vicious circle is generally established, which, without treatment, will cause the death of the patient.

In checking up the accuracy of this rule in the 1,000 cases studied, Miller found that in patients, who were within the danger zone as determined by this rule for more than 25 minutes, the mortality rate was 69.23 per cent.

In order to standardize the surgeon's and anaesthetist's conception of circulatory depression, the following three degrees established by Moots and myself, have been accepted by the National Anaesthesia Research Society and included in their uniform Anaesthesia Record.

These degrees of circulatory depression are:

1. *Safe*: Ten to fifteen per cent. increase in pulse rate without change in pressure. Ten to fifteen per cent. decrease in blood pressure without change in pulse rate.

2. *Dangerous*: Fifteen to twenty-five per cent. increase in pulse rate with fifteen to twenty-five per cent. decrease in blood pressure.

3. *Fatal*: Progressively increasing pulse rate above 120 with progressively falling blood pressure of 80 mm. or less systolic, and 20 mm. or less pulse pressure, for more than 20 minutes.

Speaking before the joint meeting of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons and the Interstate Association of Anaesthetists, in Cincinnati, 1919, Moots and I emphasized the fact that:

"It is not remarkable that nitrous oxide-oxygen should be safer in shock and in preventing shock, than other anaesthetics, when one recalls that muscle cannot be paralyzed with it. The greatest responsibility of the anaesthetist is to avoid relative over-dosing of the patient in an effort to secure flabby musculature at the demand of the surgeon especially. The relaxation is not confined to striated muscles of the abdomen and extremities but extends to the striated muscles of the heart. The effect is at once reflected by the pulse pressure and, if pushed too far the diastolic pressure is also decreased, showing the action upon smooth muscles as well. The clinical study of blood pressure has convinced us that the final factor in shock is muscular exhaustion or an interference with muscular action. One thing is most apparent: the average patient, having been profoundly anaesthetized for extreme relaxation, is

half shocked—a second degree depression—and it often takes but little trauma to complete the picture of third degree depression."

These studies gave us a basis for utilizing primary and secondary saturation as a test for the hazardous patient's capacity for operation.

When a normal pulse rate is reduced the blood pressures normally fall from 25 to 50 per cent. of the difference in pulse rate, and conversely when the pulse rate increases the blood pressures rise. A patient who has a pulse rate of 120 or over may develop a slower heart beat under anaesthesia with a slightly increased blood pressure or the pressures may remain stationary while the pulse becomes slower. Such a condition is of good omen and not an indication of circulatory depression. When changes in pulse rate are not accompanied by the above changes in blood pressure we have some degree of circulatory depression.

Primary and secondary saturation at one phase increases the pulse rate and immediately following decreases the pulse rate and blood pressures. When the oxygen reaches the blood stream a moment later the pulse and blood pressures return immediately to their former readings. This is the normal response to saturation and re-oxygenation.

Now in the moribund case we usually have circulatory depression of a more or less serious degree to begin with, and the effects of primary saturation followed by a breath or two of oxygen may show an increased circulatory depression lasting for three to five minutes, which contraindicates any but extremely short and simple operative procedures.

In the class of cases under discussion, requiring an abdominal or other *major* operation, a deeper test is needed to determine the reserve or power of compensation which the patient must have to go through the procedure. For this, I have many times resorted to first primary and then secondary saturation, noting the effect on the pulse and blood pressure relations for three to five minutes after the oxygen is administered. If the pulse is increased as much as 25 per cent. and the blood pressures decreased 25 per cent. or more (second degree depression) and the patient, while inhaling oxygen, is unable to compensate within five minutes, he may be regarded as absolutely inoperable for major surgery, in the hands of the best organization of an anaesthetist, surgeon and assistants.

The personal factor enters in to saying "yes" or "no" to a proposed operation. Patients are being shocked to death every day who would easily pass the above test. The anaesthetist must properly rate himself as well as the surgeon, assistants and patient, denying none who might live if operated and refusing all who will die while being operated.

I have had no deaths or serious scares as a

result of either primary or secondary saturation.

CONCLUSIONS

1. Primary saturation of the patient with nitrous oxide fails in some cases to produce sufficient relaxation for certain operations.

2. Nitrous oxide produces muscular relaxation when it is sufficiently concentrated in the tissues and associated with enough oxygen to prevent anoxæmic rigidity. High concentration of this gas in the tissues is required to displace the non-anaesthesia diluting gases.

3. The technique of secondary saturation which I have described and used extensively for several years, intensifies nitrous oxide anaesthesia and produces sufficient relaxation for any operation.

4. Secondary saturation is readily lost by subsequent errors in the mixture administered, leaks of air into the patient's air passages and probably by absorption of air through the abdominal cavity and skin, requiring occasional resaturation in some cases.

5. Its successful and safe employment depends upon an apparatus capable of inflating the lungs with oxygen should the patient be crowded, intentionally or accidentally, into spastic apnoea. It depends also upon an accurate interpretation of the signs of anesthesia, but disregarding the presence or absence of cyanosis as an anaesthetic sign.

6. Secondary saturation has been followed by no post-anaesthetic sequelæ which may be attributed to its use. I believe it is safer for the patient than an ether sequence, or combined gas-oxygen-ether, and convalescence is decidedly better, when even the small amount of ether, which is employed to relax muscles, is avoided in the narcosis.

7. Primary and secondary saturation, in their relation to the pulse, and blood pressure ratios, make a valuable and safe test of operability in doubtful and moribund cases.

2233 ASHLAND AVE.

Ovarian Dermoid Cysts; Etiology, Diagnosis and Treatment*

Benjamin Rush McClellan, M.D., F.A.C.S., Xenia

Editor's Note.—Dermoid cysts of the ovary are not only frequent in occurrence, but they may be found in the premature infant as well as in the aged woman. These tumors are usually monolocular and of small size. Their growth is slow, which favors the development of a long pedicle and this predisposes to twisting, especially during pregnancy. Aside from the severe pain and pressure symptoms of this complication, circulation may be interfered with and inflammation and necrosis result with general peritonitis or fistulas connecting with the urinary bladder and bowel. The length of pedicle also often admits of extreme and unusual transposition. The predominant quality of the cyst contents may help in making a diagnosis, for if there is much hair it is possible to get a characteristic crepitation, and if they are many teeth and bony fragments these may be recognized by the examining fingers. Radiographic diagnosis is also valuable. The only treatment is operative removal as soon as diagnosis is made and, in the opinion of Dr. McClellan, this is especially urgent when there is a co-existing pregnancy.

WHILE the term "dermoid cyst of the ovary" is not a scientific one, it has become so fixed in surgical and pathologic literature that it will require the dictum of a great leader in one or the other of these fields, to supplant it by a name more exact in its histopathologic description.

ORIGIN OF DERMOID

Until in very recent years the origin of these strangely interesting neoplasms has remained in the domain of theory, and the controversies arising from their investigation and discussion were as interesting as ingenious. As recently as 1917, Graves expressed the opinion that "the dermoid does not develop from a true germ-cell or ovum, but from a blastomere which at an early time had been separated from the original germ-cell bundle," arguing that "the isolation of such a blastomere if transported away from its origi-

nal location, accounts for the dermoid and teratoid tumors found in other parts of the body."

Probably the most illuminating contribution on the subject in recent years is that of Goodall of Montreal, who, in a very comprehensive report of his research in "Origin of Tumors of the Ovary" says: "Today there is but little doubt that ovules by a system of parthenogenesis are responsible for the presence of dermoids and teratomata." Again, he tells us that "both these tumor types were really of only one kind, for they both contained products of the three fetal germinal layers, namely, the ectoblast, mesoblast and endoblast. The difference was one of the relative quantities of these and not of quality." Again, he quotes Lecaillon, who has done a great deal of work upon this subject, and who states: "We can consider as proved beyond all possibilities of doubt that parthenogenesis really takes place naturally in many mammals that are of widely differing species. Parthenogenesis is really evoked by this fact, and this fact alone, that the unfertilized ovum is endowed with the ability and property to evolve along the lines of embry-

*Read during the Thirty-Third Annual Meeting of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, Atlantic City, September 20-22, 1920. From the American Journal of Obstetrics and Gynecology, February, 1921.

onic development of segmentation and differentiation, and not because the egg has encountered special stimulus and special surroundings." He credits Loeb with the statement that parthenogenesis occurs in about 10 per cent. of guinea pigs before they are six months old. Later the condition is much less frequent. Loeb describes one of these cases in the following words: "We see in each case a chorionic vesicle with trophoblast, plasmodia and syncytia penetrating into the neighboring tissue. There is also a structure present which is to be interpreted as a neural tube. As this type of growth occurs in the cortex of the ovary where follicles are normally seen, and are found within follicle-like cavities, they can be derived only from ova developing parthenogenetically. Fertilization can be excluded as the life history of some of these animals is known and precludes such interpretation. It is very probable that parthenogenetic change sets in soon after ovulation, the altered condition in the ovaries at that time supplying the necessary stimulus." Loeb further says, "The later stages of these developing embryos bear some resemblance to chorioepitheliomata and teratoid tumors." Goodall remarks that Loeb might have gone one step further and included dermoids, for histogenetically they are the same. "Nägel, Minot, and Ribbert have found wandering ova throughout the general abdominal cavity." "Grant such wandering of ova," says Pfannenstiel, "then the propagation of derivative tumors allows a very ready and easy explanation."

HISTOLOGIC PRODUCTS

Having established the fact that all three germinal layers contribute to the growth of these tumors, it is not strange to find at times a great variety of histologic products. Cutaneous derivatives seem to predominate, especially hair and sebaceous material. Teeth, bone, cartilage, glandular tissue, mucous and serous membranes, muscle and nerve fibers, and cerebral substance are found. Violet, as early as 1907, reported one case of dermoid cyst containing thyroid tissue, and another containing lymphatic tissue.

CLINICAL CONSIDERATION

Before considering diagnosis and treatment of these tumors a few clinical facts should be stated. First, as to the relative frequency of their occurrence. A report from the Mayo clinic states that in a thousand ovarian specimens 98, or nearly 10 per cent. were dermoids. Of these 14 per cent. were double, and 7 per cent. were malignant. They occur at any age, having been found in premature infants and in a woman of 84 years, but up to the time of puberty they are found more often than any other ovarian tumor. Cattermole reports an interesting case of dermoid cyst of the ovary in a child of eight years, as follows: "Ten days previous to the present sickness she had pain in the abdomen. Present at-

tack began, after running down stairs, with sudden pain in right side and groin. On examination the abdominal muscles were so rigid that the underlying organs could not be made out. Temperature 99°F., no vomiting. An enema brought fecal matter, and was followed by vomiting of undigested food. The next morning the abdomen was relaxed and a round firm tumor mass could be felt in the median line above the pubes. She was operated upon the second day after the attack. Considerable dark fluid was found in the peritoneal cavity. The tumor was dark red in color, the size of a small orange, and attached by a narrow pedicle to the right ovary. The pedicle was twisted twice; the mass contained bone, hair, and several cysts containing bloody serum. Recovery."

Dermoids cause relatively few menstrual disturbances and, apparently, do not favor sterility. Gellhorn reported a case of bilateral dermoid cysts, one of which he removed at the fourth month of pregnancy which continued to term. Later a second pregnancy went to a successful issue, after which the remaining tumor was removed. Wells also reported bilateral dermoids of the ovaries with removal of both, and the pregnancy uninterrupted.

These tumors are usually monolocular and of small size. Their growth is slow, which favors the development of a long pedicle which, in turn, predisposes to twisting, especially during pregnancy. This latter condition is prone to cause severe pain and pressure symptoms and may so interfere with the circulation as to produce inflammation and necrosis, which may lead to more serious complications, as general peritonitis, or fistulae connecting with the urinary bladder and bowel. Quinby reports an interesting case: "A woman aged forty-three, complaining of dysuria, who gave no history of previous illness except that when she was 23 years old she had an attack of 'peritonitis.' About four months before entering the hospital she suddenly noticed that urination was painful, and this had persisted ever since. The urine was turbid, but there was never any hematuria; gradually dysuria, and frequent micturition increased, which was not relieved by emptying the bladder. Finally walking became painful. At the time of operation it was found that a dermoid cyst of the right ovary, containing hair and pultaceous material, filled the entire true pelvis and communicated with the vault of the bladder."

While as a rule these tumors do not attain a size much above that of a man's fist, they occasionally grow very large, as illustrated in a case reported by Michinard. His patient, (colored,) aged thirty-one, had four children, labors normal, three miscarriages. Menstruation always normal except during the past 18 months, when flow became more profuse and of longer duration. She complained of frequent attacks of abdominal pain for about two years, no typical attacks

of appendicitis pain. On examination the lower abdomen was felt to be filled with a movable doughy-like mass, somewhat inclined to the right. From the consistency of the tumor a dermoid cyst was diagnosed. Operation revealed a 6½ pound dermoid, filled with sebaceous matter and kinky hair. Tumor was freely movable and easily extirpated. Left ovary normal. Recovery.

The length of pedicle often admits of extreme and unusual transposition as illustrated by Teller and Block. The cysts were typical dermoids, each about the size of a peach, the unusual features being that both cysts were on the right side. This was due to the fact that the left cyst had migrated behind the uterus, passed around the outer side of the pedicle of the right cyst and, after completely encircling it, had dropped between the right tube and its own pedicle into the culdesac. In so doing, it had strangulated itself and was practically free in the pelvis.

DIAGNOSIS

The foregoing clinical facts aid greatly in making a diagnosis. Furthermore the predominant quality of the cyst contents may help, for example, if there is much hair, it is possible to get a characteristic crepitation, if there are many teeth and bony fragments these may be recognized by the examining fingers. Johnson says, "Dermoids with a large amount of putty-like contents may be indented by the examining fingers and these indentations may remain some time as in ed ma." Küstner says that these tumors, when unattached, have a tendency to float in front of the uterus. The case reported later by the writer confirms this statement. In view of the fact that so many of these neoplasms contain bone and teeth, the radiograph is of very great value. This is well brought out in a report of a case by Fagge. The patient, age 27, had at first diffuse abdominal pain, later it was of a colicky nature with nausea but no vomiting. Renal colic, due to calculus, was at first suspected; but X-ray showed two teeth at the level of the pelvic outlet; the root canals showing distinctly in the plate. X-rays of kidneys showed no evidence of calculi. After being sent to the surgical ward the patient suddenly began to vomit violently, became distended and tympanitic, showing signs of pressure on ureter and intestinal obstruction; previous to attack of obstruction she had suddenly passed an unusually large quantity of urine, suggesting that the renal symptoms at the early stage were due to temporary hydronephrosis. Laparotomy disclosed two ovarian cysts, firmly impacted in the pelvic brim. Both were multilocular, contained hair and the usual pulpy matter; teeth were found in the right cyst; the left cyst evidently pressed on the pelvic colon causing the obstructive symptoms. Both cysts were extirpated, no trace of ovarian substance or of supernumerary ovaries could be seen macroscopically. Recovery uneventful. Teeth in

right cyst were about as long as adult canines; no other traces of dental or bony matter were found; a few calcified areas were observed in the debris. Notwithstanding the foregoing, the fact remains that a very small percentage of these tumors are diagnosed before operation or autopsy.

TREATMENT

In the matter of treatment there are a few established rules. Remove the tumor always by the abdominal route. Operate as soon as diagnosis is made; this is especially urgent when there is a co-existing pregnancy. When a dermoid is associated with uterine fibromata it should be removed with the uterus. Carefully scrutinize the opposite ovary. To illustrate the importance of this injunction I quote from a report of a case by Campbell: "A woman, aged forty, one child aged sixteen; no miscarriages; complained of colicky pains at nearly every menstrual period, otherwise her health was normal. On examination she was found to be tender about the appendix. She had a small cystic tumor, apparently of the left ovary, in Douglas' pouch. The right ovary was felt near the pelvic brim and seemed to be normal. Abdominal section was performed. The left ovary proved to be cystic, prolapsed and was removed. (The right ovary showed enlargement and some fluctuation). The greater part was excised. Both ovaries were found to be dermoid. The patient's symptoms were referred to the right ovary, which was not prolapsed, but contained a deep-seated cyst, bounded all around by ovarian tissue, which it was stretching as it gradually grew. This ovary was so normal in appearance that it was nearly left behind. Its tense cystic feel, and the fact that the pain was referred to the right side led to its getting more attention than it, at first sight, appeared to deserve, and terminated in its removal." On the other hand it is important to conserve as much ovarian tissue as possible in accord with the rule laid down by Schroeder in 1882.

In view of the fact that it is impossible to differentiate ovarian cysts that have been infected, it should be the rule that none of these cysts be tapped at time of the operation. Graves says: "The cyst content is proteolytic and corrosive, and when discharged into the abdomen by rupture of the cyst is conducive to peritonitis." The qualifying word "conducive" is well chosen because it is a well-known fact that the contents of these cysts have often escaped into the peritoneal cavity without any ill result. Graves also calls attention to the fact that, "malignant change may take place in some part of the included tissue, most commonly of the epithelial type and next frequently of the thyroid tissue." Furthermore, these tumors are vulnerable to hematogenous infection; one notable case has been reported in which the typhoid bacillus was found.

Therefore, never aspirate; and prevent, if possible, the escape of any of the contents of these tumors into the abdominal cavity.

CASE REPORT

Mrs. D., aged twenty-five, married four years, the mother of two children, two and one-half years and nine months old, respectively. Family history good. In childhood she had all the communicable diseases incident thereto, plus typhoid fever. Following this her health had been remarkably good. Her menstrual life began at fourteen, was of the 28 day type, normal, and only interrupted by two pregnancies and subsequent lactation periods. She had no miscarriages.

This patient was referred to me by her family physician, March 21, 1920. She gave a history of cramp-like pain, five months previous, in the lower left quadrant of the abdomen, following a short horse-back ride. This pain was very severe and was accompanied by intestinal obstruction and a constant desire to urinate. However, she was soon relieved by an anodyne and a short stay in bed. Following this attack she discovered a round lump, easily felt, above the rim of the pelvis and a little to the right of the midline. She noted also that this tumor would disappear when she assumed the recumbent posture. Five days before coming under my observation she lost her balance in stepping from a chair to the floor and was again seized with violent pain accompanied by frequent micturition similar to, but more severe and persistent than, the previous attack. Each physical examination of the patient was followed by pain, lasting for some hours. The examination revealed a tumor about the size of a large orange anterior to and a little to the right of the uterus. It could be displaced without moving the uterus, but this caused great pain. Apparently there was a marked increase in the size of the tumor during the few days she was under observation. This led to a preoperative diagnosis of a cystoma of the left ovary with hemorrhage into the cyst. Celiotomy was performed March 24, 1920, through a median incision, and the tumor removed without difficulty. It was somewhat larger than a man's fist, very dark in color, and highly congested. The pedicle was tightly twisted. The tumor was monolocular and contained about 1000 c.c. of oily fluid, sebaceous material, a small tuft of light-brown hair, a fairly well formed lower jaw bone, ten well-formed teeth and a few irregular pieces of bone and cartilage. The symptoms were easily accounted for by the torsion of the pedicle and the mechanical interference with the function of the bladder and bowel. The patient made a prompt recovery and was discharged from the hospital April 11, 1920.

The writer, in reporting this case with its mistaken diagnosis, has been prompted by a desire to emphasize the fact that the mistake would

have been avoided if we had called to our assistance a competent radiographer. The treatment and result would have been the same. But it is always a great gratification to a surgeon, and worthy of his best endeavor, to have his operative findings agree with his preoperative judgment.

7 EAST SECOND STREET.

PROPAGANDA FOR REFORM

More Misbranded Nostrums—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drug Act: White's Wonder Worker (W. W. W. Medicine Co.), falsely represented as an effective remedy for malaria, rheumatism, syphilis, all kidney and liver complaints, female disease and a number of other things. Kar-Ru and Gon-Nol (Kar-Ru Chemical Co.), the first falsely represented as an effective remedy for rheumatism, kidney, liver, bladder and stomach troubles, mental and physical debility, blood diseases and irregular menstruating; second fraudulently represented as an effective remedy for gonorrhea. O-Zo-Nol (Ozonol Chemical Co.), falsely represented as an effective cure for eczema and all eruptions and diseases of the skin, nasal catarrh, sore throat, erysipelas, croup, piles and earache. G. S. Remedy, falsely represented as an effective remedy for pellagra, rheumatism, indigestion, malaria, stomach, liver, kidney and bladder diseases and syphilis. Gon-Nor (Occidental Medicine Co.), falsely represented as an effective astringent in acute and chronic gonorrhea, urethritis, etc. Methyloids (Frederick Stearns & Co.), falsely represented as a successful treatment for gonorrhea and its complications. B-I-F Combination and B-I-F Capsules (Hollander-Koshland Co.), both represented as an effective remedy for gonorrhea, gleet and disorders of a similar nature and origin. Brsco (Brsco Medicine Co.), falsely represented as a treatment for tuberculosis, bronchitis, Spanish influenza, hay-fever, asthma and ordinary coughs and colds. Sulpho-Saline Still Natural Mineral Water (Excelsior Springs Mineral Water & Bottling Co.), falsely represented as an effective cure for stomach troubles, headaches, jaundice and vertigo (Jour. A. M. A., March 5, 1921, p. 671).

NEW AND NON-OFFICIAL REMEDIES

Proflavine-Heyl—A brand of proflavine (see New and Nonofficial Remedies, 1921, p. 23). Heyl Laboratories, New York.

Tablets Acriflavine-Abbott 0.03 Gm. — Each tablet contains 0.03 Gm. acriflavine-Abbott (see New and Nonofficial Remedies, 1921, p. 21; Jour. A. M. A., March 26, 1921, p. 859).

Thrombophlebitis During the Puerperium Following Influenza: With a Report of Cases*

Lewis M. Smead, M.D., Toledo

Editor's Note.—The importance of pelvic thrombophlebitis may be gauged by the fact that it has been found in from 30 to 50 per cent. of women dying of puerperal infection. While the postpartum condition of the woman following childbirth tends to facilitate the occurrence of thrombophlebitis, the determining factor is infection which enters the system either through the placental site or other traumatized tissues or from some focal infection. The infection organism is nearly always the streptococcus. The condition may be acutely virulent or sub-acute. Irrespective of treatment the mortality is high. The extensively fluctuating, hectic temperature, frequent, severe chills, sharply defined, and slightly tender masses in the region of the pelvic veins, according to Dr. Smead, are convincing evidence of thrombophlebitis. The results of surgical treatment are probably slightly better than the non-operative, but the indications for operation are difficult to determine. The greatest conservatism, in the judgment of Dr. Smead, must govern the choice of cases for operation, and the majority of these should not be operated.

THE present interest in septic pelvic puerperal thrombophlebitis arose when it was suggested that the pyemia, which makes the disease so serious, might be prevented by surgical intervention. In other fields of surgery, as early as 1784, John Hunter had successfully treated a case of pyemia by ligating the saphenous vein; and in 1884 Zauful had ligated the internal jugular vein for lateral sinus thrombophlebitis. In 1898 Freund suggested that, as in certain cases of fatal puerperal infection the only lesion present was a thrombophlebitis of the spermatic veins, the ligation or excision of these vessels would be a practical operation. Sippel in 1894, and Lusk in 1896, had already suggested hysterectomy with the excision of the thrombosed veins as a method of dealing with the condition. In 1902 Trendelenburg reported the first successful ligation of the pelvic veins for thrombophlebitis, and it was his paper, together with one by Bumm, that stimulated the interest in this subject.

Since the report by Trendelenburg many exhaustive papers have been written on pelvic thrombophlebitis, attempting to establish the diagnosis, determine the indications for operation, and, by comparison of operative and non-operative results, to decide the question of surgical intervention. As yet, however, the number of operative cases is too small to make a final conclusion possible.

CAUSATIVE FACTORS

Pelvic thrombophlebitis, following childbirth, is more common than is ordinarily realized. It has been found in from 30 to 50 per cent. of cases dying of puerperal infection. There are many reasons why this condition should be frequent in the puerperium. The blood current is slowed in the pelvic veins and in the veins and sinuses of the uterus, because the large vessels of pregnancy have less to do in the puerperium and also

because the woman is quiet in bed and is weak and anemic after her delivery. Some of the veins are even filled with clots or thrombosed. This is especially true in a subinvolved uterus. The increased viscosity of the blood and the high platelet count of pregnancy, also favor thrombosis. The traumatized pelvic veins and the open, torn uterine sinuses are especially susceptible to thrombophlebitis.

The determining factor in thrombophlebitis, however, is the infection which enters, as a rule, through the placental site, but also through tears in the cervix and vagina and, probably, not uncommonly by the general circulation from such foci as infected teeth, tonsils, and air passages. The infecting organism is nearly always the streptococcus.

Types.—In general we may speak of two types of puerperal thrombophlebitis: the acutely virulent, rapidly progressing type and a less virulent, subacute, slowly extending one. The acute infection goes rapidly along the interior of the blood vessels as an acute phlebitis. It proceeds more rapidly than the thrombus formation, reaches the general circulation, and quickly produces a fatal septicemia. The subacute infection also extends as a phlebitis, but is preceded by a thrombosis, which delays or blocks its progress. These patients have a better chance than those suffering with the acute variety; however, the mortality is very high. In thrombophlebitis the infection begins in the torn, open, venous sinuses of the placental site and extends through the veins of the uterus to the pelvic veins, whence it goes by the ovarian, uterine, median, or smaller veins to the vena cava and general circulation. In the less virulent cases the infection is delayed or entirely blocked by the thrombus formation, which has preceded the infection and is in this case a conservative process.

In a large percentage of cases, however, the infection works by the softening thrombus and, along with bits of the thrombus, escapes into the circulation, producing rapid rises in temperature, chills, and metastatic foci in the lungs and other organs. Strangely, however, massive, suddenly

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fatal pulmonary emboli are rare in puerperal thrombophlebitis. Later in the course of the disease the infection breaks through the vessel walls, producing a perivascular lymphangitis and not infrequently a localized collection of pus. Abscess formation within the walls of the uterus is also a common complication.

THE CLINICAL PICTURE

The clinical picture of uncomplicated, pelvic thrombophlebitis is quite characteristic. The temperature is the most reliable symptom. As in lateral sinus infection, it rises suddenly from normal to 105° or 106° F and, in a short time, falls to slightly above or below normal, where it remains until the next sudden rise. During the high temperature the patient looks flushed and ill, but during the remission it is hard to believe that she is not entirely well.

The characteristic temperature is frequently preceded, for a few days, by a low grade fever.

Severe, prolonged chills are present in the majority of cases. Not infrequently, however, they are few or entirely absent. Their early appearance is supposed to indicate a grave prognosis. Their disappearance is said to indicate an early recovery. Fatal cases, however, may occur without any chills.

The pulse rate fluctuates with the temperature, but is relatively low until the patient begins to suffer from severe sepsis, the result of the development of metastatic foci or of extensive abscess formation about the veins or of septicemia.

The blood cultures are as often negative as positive. Cultures taken near the time of a chill or sudden rise of temperature are more often positive. The occasional negative or positive blood culture is not of prognostic value; however, the constant presence of a positive culture is of serious moment.

The prolonged course of this disease, lasting for months, is quite characteristic. Even without complications it may last for many weeks. The onset of the symptoms typical of thrombophlebitis may be within the first few days after delivery, but it is more often early in the second week.

In phlebitis of the pelvic veins pain is usually absent. Slight tenderness about the involved veins is the rule. When the infection breaks through the vein walls, pain and tenderness are of course present. The thrombosed vessels can usually be palpated at some stage of the disease. This is especially true when the uterine veins are the seat of trouble.

When the ovarian veins are involved, they frequently cannot be palpated. In the early acute cases the thrombosed veins can less often be discovered. In the early stages of thrombophlebitis the uterus is usually subinvolved, and there may be some abnormal discharge in which the streptococcus is commonly found. Later, in the chronic cases, the uterus is small and firm. Aside from some edema on the side involved, the tubes and

ovaries are normal. Peritoneal symptoms, if present, are due to the complications or sequelae of thrombophlebitis, not to the disease itself. Retrograde involvement of the femoral veins, with swelling of the legs, is a sign of extensive involvement and usually indicates a hopeless condition.

DIFFERENTIAL DIAGNOSIS

Many men question whether there is a symptom complex by which pelvic-thrombophlebitis can be diagnosed with reasonable accuracy. The extensively fluctuating, hectic temperature, frequent, severe chills, sharply defined, slightly tender masses in the region of the pelvic veins are convincing evidence of thrombophlebitis. Even if the chills are absent and no thrombosed vessels are palpable, yet the peculiar temperature and the patient's unusually normal condition between temperature rises are very suggestive symptoms, if the uterus and adnexa are free from inflammation. The prolonged course of the disease is also very characteristic.

In septicemia the temperature fluctuates less, chills are not so common, the patient appears ill all the time, the pulse is higher, and blood cultures are more constantly positive. In pelvic lymphangitis the induration is more extensive, not sharply defined, and very tender and painful. The course of the disease is less chronic, and the mortality relatively low. A small area of lymphangitis of a chronic type is difficult to distinguish from a group of thrombosed pelvic veins.

A puerperal thrombophlebitis in the veins outside of the pelvis is indistinguishable from the same condition in the pelvic veins, so far as symptoms are concerned. Not infrequently an infection passes by the pelvic veins and involves the iliac veins or the vena cava, primarily, just as it does so commonly the femoral vessels.

PROGNOSIS

The prognosis in puerperal thrombophlebitis is not good. In the non-operative cases the mortality is estimated from 50 to 100 per cent. Sanes gives it as 51.6 and Brettauer as 47.5 per cent. Miller gives the gross mortality of the operative cases as 51.6 per cent and the corrected mortality, after leaving out the perfectly hopeless cases that never should have been operated, as 33.9 per cent. Williams thinks that early cases, involving the ovarian vein alone, should not give an operative mortality of more than 10 per cent.

Undoubtedly, if we perfect our means of diagnosis and are on the lookout for these cases, we will not only get them earlier, but we will recognize some of the milder ones. This will improve the mortality rate of the non-operative cases as well as the operative. It is not quite fair, it seems to me, to charge all the advanced, severe cases of the past to the non-operative mortality record and to correct the operative record by omitting all the bad cases and including the early and mild ones.

Interest in the treatment of septic puerperal thrombophlebitis has been chiefly surgical since 1902.

Prophylaxis consists of intelligent, modern obstetrics, with careful asepsis, complete evacuation of the uterus, good drainage, a minimum amount of traumatism, and as little hemorrhage as possible. In the puerperium it is important that the circulation be kept as active as possible by good food, fresh air, heart stimulation if necessary, and getting the patient out of bed as early as is reasonable.

TREATMENT

The *non-surgical treatment* consists in general measures to keep up the body resistance, good food, abundance of fresh air, and the avoidance of anything which may dislodge the thrombus—such as douches, enemata, and pelvic examinations. Vaccine and serum treatment has been disappointing.

The *surgical treatment* has consisted in the ligation or excision of the involved veins and in the drainage of perivascular abscesses. The transperitoneal route has proved better than the extraperitoneal or vaginal approach. The question of whether to ligate or to excise the involved veins has been more difficult for the profession to decide. Opinion, however, seems in favor of ligation, unless rupture of a vein filled with pus seems likely or perivascular abscess actually exists. Excision or simple drainage then is advocated. In thrombophlebitis of the internal iliacs or median iliac veins, ligation is the only procedure anatomically possible; but with the ovarians either excision or ligation can be done. If the operation is performed early in the disease, when other vessels are likely to become involved, all the cardinal veins must be ligated. In the late stages of the more chronic form of the disease one may be content to ligate only the vessels on the side diseased.

Baldwin, with excellent results, has done complete hysterectomy for thrombophlebitis of the pelvic veins. He ligated the arteries only, left the proximal ends of the veins open for drainage, filled the pelvis with gauze, and drained by the vagina. His cases were desperate ones, containing abscesses in the uterine walls. The profession has not accepted hysterectomy in the treatment of simple thrombophlebitis of the pelvic veins, but in cases with abscesses in the uterine walls, it must be carefully considered.

The common iliac veins and even the vena cava have been successfully ligated and without giving rise to gangrene or even much edema. Most of the patients, however, died because the infective process could not be stopped, but they lived long enough to prove the ligation itself not to be so serious.

Those who favor the surgical treatment of thrombophlebitis assert that an accurate diagnosis can be made, that in the early cases the pathology is limited to one side of the pelvis and even

to one ovarian vein in many cases, that ligation does arrest the progress of the disease if not too far advanced, that the operation at least does no harm, that the non-operative mortality of 52 per cent. can be reduced to 30 per cent. or less by operation, and that a long, exhausting illness can be cut short.

DETERMINING OPERABILITY

Those who are opposed to major surgery in thrombophlebitis argue that the diagnosis is not accurate, that usually the disease cannot be recognized until cure by operation is impossible, that operation in early cases will result in many unnecessary operations, that ligation frequently does not arrest the disease even in the vein involved, that it is impossible to ligate all veins by which infection may extend, that the disease often involves higher veins without involvement of the pelvic vessels, that fatal metastatic foci may exist at time of operation and be unrecognized, that any major operation is serious for such ill patients, that the operative mortality is little less than the non-operative, that there is serious danger in manipulating such virulent infections, that the thrombosis is a strictly conservative process not to be disturbed.

It is generally agreed that it is useless to operate pelvic thrombophlebitis if serious metastatic foci exist, if there is a constant bacteremia or septicemia, if pelvic cellulitis, marked peritonitis, or extensive perivascular abscesses are found, and especially if the thrombophlebitis has involved the vena cava. It is impossible to say just what cases of thrombophlebitis should be operated, and harder still to choose the best time for operation. The ultra acute cases, certainly, are not suitable for operation. The subacute or chronic cases, however, offer some chance of cure. The number of chills cannot be used as a guide in choosing the time for operation. If, after the first acute onset, the symptoms settle down to a definite, typical course; if there are no serious complications; if the patient is not improving but rather losing, operation should be considered. However, great conservatism must be the rule in considering a major operation on the infected puerperal woman.

CONCLUSION

1. Puerperal pelvic thrombophlebitis is more common than is ordinarily realized.
2. The diagnosis can be fairly accurate.
3. The source of the infection may have a distant as well as a local origin.
4. The results of surgical treatment are probably slightly better than the non-operative.
5. The indications for operation are difficult to determine.
6. The greatest conservatism must govern the choice of cases for operation.
7. The majority of cases should not be operated.

CASE REPORTS

The following cases were seen in consultation:

CASE 1.—On Jan. 25, 1920, Mrs. N. G. R., aged twenty-three, a vigorous primipara was delivered of a healthy child. Her pregnancy had been entirely normal and free from any unusual vaginal discharge or infection of the urinary tract.

Labor lasted eleven hours, no instruments were used, and there was no unusual hemorrhage. Chloroform was given for three quarters of an hour, and three vaginal examinations were made without gloves.

The delivery took place during an influenza epidemic and the baby and the grandmother suffered from the disease.

On the third day of her puerperium the patient had a sudden rise of temperature to 105°, with headache, cough, and coryza. The fever varied from 100° to 104.5°F. for twelve days. A diagnosis of influenza was made.

For five days the patient had a low grade fever from 98°-100°. There was some discharge from a slowly involuting uterus.

On the twentieth day of her puerperium the patient had a sudden rise of temperature to 102° and for 36 days had a suddenly fluctuating temperature from 99 to 104.5°. There were a few slight chills and many profuse sweats at the periods of high temperature.

During a good part of each twenty-four hours the temperature was normal, and at this time the patient looked and felt well, and her appetite was good.

At no time during the first five weeks of the illness could any pathology be found in the uterus, adnexa, or pelvic veins. The uterus involuted well, and no pain or soreness was present in the pelvis or abdomen.

In the sixth week soreness, pain, and induration appeared in the lower abdomen at the outer end of the right broad ligament. A cord-like thickening from the uterus to the mass in the right lower abdomen could be palpated by the vagina. An extraperitoneal abscess was opened by an abdominal incision, and one ounce of thick pus, containing a pure culture of pneumococcus, evacuated.

The temperature then became normal for ten days only to be followed again by a temperature typical of thrombophlebitis, after which another abscess developed and opened spontaneously. After some fluctuation the temperature became permanently normal.

There were no metastatic foci at any time. The whole course of the disease was a little more than one hundred days. The patient became quite anemic, but her condition never was extremely bad. At present she is perfectly well.

The diagnosis in the case is thrombophlebitis of the right ovarian vein with perivascular abscess.

CASE 2.—Mrs. E. W., aged thirty, the mother of one child, was delivered of a normal infant on March 10, 1920. Pregnancy had been normal, and she had had no abnormal vaginal discharge.

Labor was short, no instruments were used, and no internal examination was made. Chloroform was given for ten minutes. There was no hemorrhage and no lacerations.

Delivery took place in a hospital during an influenza epidemic. On the third day after delivery the patient had a sore throat, headache, and chill, and suffered an attack of influenza.

On the seventh day the patient had a sudden rise of temperature to 104°, pulse 112, and a severe chill. For twenty days thereafter the patient had rapid rises of temperature to from 102° to 105° with a pulse of from 90 to 120. There were frequent chills and sweats. Between the rigors the patient looked well, and her appetite was good.

The total course of the temperature was twenty-seven days. Pelvic examination showed the uterus to be small, the lochia normal, and adnexa not palpable. There was, however, a small, sharply-defined, moderately-tender induration in the base of the left broad ligament. This very gradually disappeared as the patient recovered.

My diagnosis was thrombophlebitis of the left uterine vein.

CASE 3.—Mrs. E. G. G., aged twenty-seven, a primipara in rather poor health, was delivered of a sickly child, that died after three weeks.

Her pregnancy had been normal and free from any infection of the vagina or of the urinary tract.

Labor lasted twenty hours. Instruments were used and chloroform was given as an anaesthetic. There was a deep bilateral laceration in the cervix and a moderate one in the perineum.

Delivery took place during an influenza epidemic and the patient suffered at least from a mild attack.

On the third day of her puerperium the patient developed a temperature of 103° with some slight tenderness in her left lower abdomen. This gradually subsided and she left the hospital on the sixteenth day with a slight temperature. During the third week her temperature ranged from 99° to 100°, but there were no local symptoms. At the beginning of her fourth week she suddenly developed a temperature of 103°, and a severe chill. The white blood count was 17,000. For eleven days she had sudden rises of temperature with slight chills. Between the rigors she was quite normal. The total duration of fever was 37 days. The uterus was large and sub-involved, and there was some bloody discharge. The adnexa were normal.

In the outer part of the broad ligament was a well-defined, slightly tender mass, palpable both by the abdominal and by the vaginal examination. This mass gradually disappeared after the temperature became normal.

My diagnosis in the case was thrombophlebitis of the right ovarian vein.

Sarcoma of the Kidney with Report of a Case*

Mangus A. Tate, M.D., F.A.C.S., Cincinnati

Editor's Note.—Sarcoma is often a tumor of early life and frequently follows some injury, which argues in favor of the trauma theory of tumor formation. Apparently an accidental injury was the precipitating cause in the case reported by Dr. Tate. Perhaps the most tragic circumstance of this unusual case was the inference that a miscarriage, instead of a kidney tumor, was at the bottom of the condition. In the presence of persistent hematuria it is always important to suspect kidney tumor and malignancy if enlargement and pain are associated with the condition. The value of nephrectomy is a debatable question and the decision to operate must be based on mature surgical judgment without too great hope of a favorable outcome.

THE following case report has many interesting phases. Miss H., a young woman, 19 years old, a patient of Dr. Poling of Ansonia, O., was seen by me in consultation in March, 1918. She came of a hardy stock of people. The family history was excellent with one exception, that a grandmother was supposed to have died of brain tumor, probably a sarcoma.

Miss H. had had the ordinary diseases of childhood; also typhoid fever in 1916, but no venereal or specific history.

The onset of menstruation at the age of 14 was painful, and at her subsequent periods, which were very irregular, there was always much pain. During attendance at high school in 1916, while at play with some of the boys and girls, she accidentally tripped and in falling struck her back on the school steps. She was unable to get up on her feet without assistance. Her mother stated that at no time since then has she ever been free from backache. During the past year the pain in back has increased. Following her graduation from high school she accepted a position as bookkeeper with the First National Bank, which position she held some six months, but reluctantly gave it up because, as she stated, she was unable to stand at the desk on account of pain in the back and increasing general body weakness. She did not improve, and on February 20, 1918, Dr. Poling first saw the case professionally and obtained the following history from a very disturbed mother:

The daughter retired the evening before in her usual weakened and exhausted condition, and during the night was seized with very severe abdominal pain which lasted about two hours. She refrained from calling her mother, but towards morning, the pain becoming unbearable, and experiencing a sudden desire to urinate, there being no vessel at hand, she took some rags from a closet, urinated in them and then, as she thought, threw them out of the window. The pain becoming somewhat easier after urination, she remained in bed until morning, when to her surprise she discovered the rags which she thought she had thrown to the yard on the window sill, and instead of with urine, they were saturated with blood. The girl naturally informed her

mother how she had been affected during the night, what she had done, and the mother, somewhat excited, unfortunately made the remark that such peculiar actions were like those of a woman having a miscarriage. This the girl strenuously denied, became hysterical, so her mother thought, but the family urged the calling of a physician. Upon the doctor's visit, hearing of such an unusual history, he very naturally came to a tentative conclusion that patient was having an excessive menstrual flow. She, however, stated that this could not be, as she had menstruated two weeks before while on a visit to her sister, and that she had lost so much blood at that time she had fainted.

Then carefully and judiciously questioning the patient, a girl he had known very well, the doctor ruled out the probability of an existing pregnancy, much to the relief of the family. Her condition was pitiable, and she was overwhelmed by her mother's unjust suspicion. She was very anemic, pulse rapid, temperature subnormal, and she complained of marked pain over the whole abdomen. The bleeding, which began so irregularly and apparently from the vagina, continued for a period of four days, but at no time was there an amelioration of the abdominal pain. The physicians who saw the case with the doctor inclined to the diagnosis of miscarriage in spite of the most vigorous denials of patient, and this naturally created a panic of fear and doubt in the family.

The following day the patient was unable to pass her urine, and upon catheterization twenty ounces of pure blood were obtained from the bladder, throwing a different light on the question of diagnosis. Then arose the query as to the source of the blood, and the probability of kidney sarcoma was now strongly suspected, especially after a most careful examination of the abdomen.

From that time until I saw the patient, catheterization was resorted to and always with the same result, a foul, bloody, pussy urine. During this time there also appeared a flow of blood as from the uterus. Pulse and temperature fluctuated, pulse 100 to 148, temperature subnormal to 103.°

I saw the patient in March, 1918. She was emaciated, pulse was 148, temperature 96° to 97°, and she complained of constant intense pain

*Reprinted from *The American Physician*, Philadelphia, Feb., 1921.

which was particularly centered in the lower abdomen. There was a foul vaginal discharge, the labia were edematous and excoriated, her general condition was distressing and her vitality at low ebb. A swelling in the right kidney region was detected, but the examination was not satisfactory because of the intense abdominal tenderness. A catheter in the bladder obtained only a few drops of a very foul-smelling bloody fluid. However, under ether anesthesia, the kidney enlargement was detected on the right side, and vaginally a most decided semi-fluctuant mass in the bladder, filling up apparently the whole pelvis. The discharge was most foul and the anterior surface of the vagina almost denuded. I was inclined at this time to think that the bladder contained besides urine, pus and blood, some growth, and it seemed wise to open it for drainage and diagnosis, as it would only be a question of a short time, with no obtainable urine, that death would supervene. A supra-pubic opening was accordingly made, and at least a pint of foul, clotted blood removed, not unlike decayed meat in appearance, with a horrible odor, but no tumor mass was found. The bladder wall was mopped with gauze and a large tube inserted for drainage.

The patient rallied and seemed much more comfortable the next four days. The drainage of bloody urine through the tube was constant, the temperature, pulse and even the general condition temporarily improved, but on March 13, the fifth day following operation, she failed rapidly and died the following morning at 5 a. m.

Autopsy report as given me by Dr. Poling: Patient died on March 14, at 5 a. m., and post-mortem performed at 2 p. m. by Dr. Husted in the presence of Drs. Reynard, Stephens, Cronin and Poling. Abdomen opened—bladder, uterus, tubes and ovaries negative. Right kidney 8 inches long, 3 inches in diameter, one-half of which contained tissue resembling sarcoma. The left kidney somewhat enlarged and contained a nodule as large as a nut. Pelvis full of pus. Two members of the family who were present refused to allow us to take a specimen for examination, but we all agreed that it was sarcoma.

REMARKS

Rodman tells us that he has been unable to find statistics bearing on the *frequency of sarcoma* in any particular race, and believes that it is relatively more frequent in the colored than in the white race. Coley emphasizes the fact that this class of tumors is apt to follow an injury, and the case reported undoubtedly bears this out.

The length of time from the occurrence of the injury to the appearance of diagnostic symptoms varies from weeks to two or three years, in this case over two years.

Sarcoma is usually spoken of as a malignancy which generally affects the two extremes of life, and yet I find that most of the kidney cases re-

ported were in the young. This bears out my own limited experience. Sex as a factor in early life is of no avail, as cases are seen with equal frequency in both sexes, but later authorities differ, some claiming more frequency in males, others in females. W. Roger Williams in his statistical table gives the frequency of those tabulated occurring between 15 and 20 years as male 33 to female 25. Senator in his table of 58 cases of sarcoma states that out of this number only three were between 20 and 40 years.

There are three important *diagnostic symptoms* of kidney sarcoma namely, presence of a tumor, hematuria and pain. The evidence of a tumor naturally brings up immediately the question of malignancy, and it usually is in the young. We find that a kidney sarcoma as a rule occupies the lumbar region and grows forward and downward. The common finding of kidney tumors in the young is due to their embryonic origin, and the many characters thus found are peculiar to a group mass.

So great is the vascularity of some of these growing sarcomata that the term *angiomata* is not a misnomer.

Hematuria, according to Ransohoff, occurs in at least 70 per cent. of all cases. It is often spontaneous, rather profuse, and may temporarily cease as it began. These intervals of absence of hematuria may be weeks to months, and in the young this symptom is far from constant, yet may be absent altogether. I find no case mentioned where the bladder became so completely filled as to shut off the urinary flow, as in the one here presented.

Pain is likewise a variable factor. In the young it may be entirely absent, yet may be very constant in the adult, usually localizing itself to the loin.

Nephrectomy is a debatable operation, especially in the young, as the mortality is so high, and when one kidney is involved the common sequence is that the other is likewise affected. In one table of nephrectomies on children under six years of age, the mortality was 50 per cent., and of the 50 per cent. of apparent recoveries, 45 per cent. died from recurrence within two months to one year. In the case here reported autopsy showed that the left kidney was also involved.

Encountering these cases, surgical judgment is of paramount importance. A study of statistics leads one to believe that the proper procedure was usually adopted, and my interpretation of proper procedure is operate, if your judgment calls for same.



WELLS TEACHNOR, M. D., F. A. C. S., Columbus

President of The Ohio State Medical Association for the year
1921-22, who assumed his office at the close of the
Seventy-fifth Annual Session at Columbus.

OHIO PUBLIC HEALTH NOTES

According to the annual report of the Columbus health board, that city has a lower infant mortality rate than any other of the five largest cities of Ohio. The rate of deaths per thousand among infants less than one year old, for the average four-year period 1916-1919 was 91.75. Cleveland's rate was 102.75; Cincinnati's 94.5; Toledo's 97; Dayton's 92.75. These figures are verified by the statistical report of the American Child Hygiene Association, Baltimore. Columbus' infant mortality rate has decreased from 102.75, the average for the period 1911-1915. Intensive milk inspections by the board of health are given as the reason for the decline.

—The necessity and practicability of sex education were presented to social workers, teachers and the Cleveland public at a series of meetings in the latter part of April, addressed by Dr. T. W. Galloway, assistant director of education activities for the American Social Hygiene Association. Cleveland has been accepted as one of six experimental stations in which a program will be worked out by the organization.

—A public health clinic recently opened in Massillon is under the direction of Drs. J. D. Holston and J. A. Carnes. Nurses for the clinic are supplied by the city hospital.

—For the purpose of extending physical examinations and health promotion systems to employees of the smaller industrial institutions of Dayton, the Merchants' Medical Welfare Association has been formed. The organizers say the idea is to give the smaller plants and their employees advantages of work that is being carried on in larger factories by special departments.

—Physical training experts from colleges, universities and gymnasiums throughout United States assembled in Cleveland, April 22, for a three-day convention of the Middle West Society of Physical Education. C. W. Savage, director of athletics at Oberlin College, presided. Among Ohio physicians who made addresses were Drs. Walter G. Stern and George W. Crile.

—As a result of their activities in the study of tuberculosis, Drs. H. K. Dunham and Kenneth D. Blackfan, members of the faculty of the University of Cincinnati College of Medicine, have been appointed members of the Council of the National Tuberculosis Association. A fund of \$500 is provided for the two physicians to carry out a sixteen months' research program.

—The pageant "Health Wins," produced in April by Columbus school children under the direction of the Ohio Public Health Association and the city department of recreation, is being given in other parts of the state as part of the Modern Health Crusade. Performances were

given in Dayton and Warren on April 29-30 and May 20-21, respectively. The pageant tells by means of a lively story, the regulations for good health. Effects are secured by spectacular use of costumes, settings, interpretative dances and pantomime.

—To Dr. Haven Emerson, director of the Cleveland health and Hospital Survey, Dr. Charles W. Eliot, former president of Harvard University, recently wrote: "The report of the Cleveland Hospital and Health Survey is the most constructive document in the field of preventive medicine that I have ever read. I congratulate you and your colleagues on having achieved it and hope that it will have a wide circulation among national, state and municipal health officers and editors of newspapers, and professional writers for weeklies and magazines."

—The resignation of Dr. Charles T. Nesbitt as health director of Akron became effective June 1. Dr. Nesbitt came to Akron in December, 1917, from Wilmington, North Carolina.

—Dr. Ross Hopkins, Columbus school physician, has petitioned the local board of education to install scales in the schools. He declares that children like to be weighed and measured, and that these processes followed out monthly will increase the interest of the children in their health. The United States Public Health Service has prepared charts which give the range of weights proper for a given height at different ages, and which are very helpful in school health supervision when proper weighing facilities are available.

—During the period from May 9 to 20 the Dayton Health Department conducted a special child welfare campaign. The effectiveness of the work in this line is demonstrated by data showing that seven years ago Dayton's infant death rate was 124 per 1,000 births, while in 1920 it was 83. This is a decrease of more than 130 infant deaths per year, based on 3,250 as the average number of births in those years.

SCHOOL SITE TO BE UNCHANGED

Although the special legislative committee appointed to investigate the necessity for a rural location for the State School for the Deaf, decided that such a change would unquestionably be to the advantage of the children attending the school, it decided that the condition of the state treasury would not permit of consideration of such a change. The committee submitted a report to this effect May 12.

CHANGE OF NAME

With the May issue *Modern Medicine* became *The Nation's Health*. The change was effected with the idea of making the title more clearly descriptive of the scope and service of the magazine in health promotion and conservation.

Annual Address by the President*

Charles Lukens, M.D. Toledo

MEDICAL PUBLICITY AND PUBLIC OPINION OR THE CUP OF HEMLOCK

"Ye shall know the truth and the truth shall make you free." Plato said that, "The opinion of many must be regarded, * * * because they can do the very greatest evil to anyone who has lost their good opinion," while Socrates took the opposite view and called "The opinion of the many, bugbears to frighten children," and incidentally this attitude brought him the cup of hemlock and an untimely termination of his usefulness. Emerson stated that "for non-conformity the world whips you with its displeasure." James Russell Lowell declared the matter in these words, "All free governments, whatever their name are in reality governments by public opinion, and it is upon the quality of this public opinion that their prosperity exists."

For twenty-four centuries the medical profession has maintained a true Socratic indifference of the world's opinion, and buried itself in the big problems which it must solve. It has shunned notoriety, and has avoided publicity, even to refusing the press information of common interest. We have revelled in our work, hiding disease and deformity from the public gaze. Our general refusal to enter the public print, has left the world, which is ever eager to know about its health and life, unsatisfied, and this thirst for knowledge for its self preservation, is satisfied by the quacks and cults who eagerly get into the limelight, for selfish purposes. The result is that the quacks and the cults are really and truly moulding public opinion by their pronouncements, especially when our dignified silence lets their stuff go unchallenged—silence gives consent, and the noisy antivaccinationist, antivivisectionist and anti everything which is contrary to the truth, get their following and just apace as these falsehoods bear their fruits, an antagonism is engendered against the truth. Were the consequences of these falsehoods confined strictly to the individuals propagating and harboring them, we might say let them suffer, but unfortunately innocent women and children and those passively ignorant, and the welfare of the state are made to suffer.

Falsehood and error are overcome by the truth. But this truth must be made to reach the seat of the error, *i. e.*, the individual holding it; or what is better, the truth should reach him first then the error could find no lodgement. How can this be accomplished? By general dissemination of medical truths, through publicity, propaganda or whatever you may call it, emanating from the medical profession or censored by it, and couched in plain understandable terms and made available

to the masses through pamphlets, lectures, magazine articles and the daily press. This should include all matters pertaining to health, child culture, dietetics, prophylaxis, work, its limitations and necessity, and play, as well as the laws of psychology which so largely enter into our well being.

As before stated the world is thirsty for facts regarding its health, a very natural manifestation of that strongest inborn sense, self preservation. The daily press with its usual keen intuition of what the people want, has for some years attempted in a very creditable way, to supply its readers with medical information through some sort of a medical column of syndicated answers and discussions by Dr. Brady, Uncle Sam, M.D., and like *nom de plumes*. One very high class young people's weekly paper, published in Boston, has for more than twenty-five years, printed a short article on some medical subject on its last page every week. Our highest grade ladies' magazines are running a page each issue on advice to mothers, problems of the child, proper dressing and hundreds of suggestions to the ladies regarding medical and sanitary matters. The Literary Digest, and similar magazines are abstracting material from the *Journal of the American Medical Association*, with surprising frequency.

Public opinion, the dictator of the world, is formed from publicity. If the medical profession is to function in its full rights and obligations, *i. e.*, to the state, to the individual, and to itself, it must have the support of public opinion. The great big factor to this end is the daily press, and here is where we are weakest. Our traditions against advertising are so ancient that no one knows their beginning. The printing press, the telephone and the automobile we promptly utilized, but the power of the daily press we have shunned, perhaps confusing it with advertising. If we persistently ignore the press, can we blame it for its sensationalism and inaccuracies and bias in things medical? Its source of information is biased. A few weeks ago a certain Ohio city was struggling with a smallpox epidemic. The papers supported the health administration by not publishing any communications from the people against the wholesale vaccination propaganda which had been put out, until at last the antis broke in by organizing their "Medical Liberty League" which they confessed to the press reporter "was composed of eminent citizens and doctors." Their executive committee included a Christian Science ex-prosecuting attorney, another ex-city lawyer, one high potency homeopath, one chiropractor, one osteopath and another medical celebrity who was not listed in any directory, and some women voters "who would assert their newly acquired citizenship to break up the

*Before annual meeting of The Ohio State Medical Association, Columbus, May 3, 1921.

tyranny of the health department." That "eminent" outfit, by their misrepresentations and falsehoods, did somewhat handicap the health administration, but this damage was insignificant compared to that caused by a similar, and partially identical band 12 or 15 years ago. This was because of the general enlightenment of the daily press and the people at large, which had resulted from the recent more popular and general dissemination of health truths.

Public sentiment, reflected through and engendered by the daily press, more than anything else broke up the late steel strike, and the coal strike; damned several members of the late Wilson cabinet, and in the recent war so fired our patriotism that we eagerly bought $4\frac{1}{4}$ per cent. bonds with 6 per cent. borrowed money "until it hurt," and gladly gave up the comforts of home and ten to fifty thousand dollar practice, to be billeted by the thousands at Ft. Oglethorpe on a captain's salary.

Mr. George W. Whiteside, counsel of the New York State Medical Society, in a recent article on "Publicity" in their State Medical Journal (Oct., 1920, and quoted in J.A.M.A., Vol. 70, No. 7), stated that, "In the United States, the citizen has a duty to the state and to his fellow man." The medical profession discharges its duty in the practice of the healing art with much self-sacrifice and is entitled to the respect of the people at large and to recognition by the state in the councils of government. That it does not exercise power commensurate with its service to the state is due to its shrinking from the use of publicity. Until this condition is changed, medical opinion will have little effect on the trend of medical legislation. He strikes the keynote, however, when he says: "without publicity in a democratic form of government, popular sentiment cannot be aroused and therefore, will not find expression in legislative action." The false beliefs and painful delusions which today are defying the truths of medical science "will not find support and entrenchment in legislative action if they are squarely met in the form of popular discussion." Merely to promote discussion in scientific journals is not sufficient, since "the great mass of the public can be reached only through the medium of the lay press and the public forum." In this way "a true sentiment, a public support, respect and love for medical science would be created." He believes that "the profession should be less sensitive to glorifying its achievements, but should be willing to render an accounting of its accomplishments that the world may know how faithfully and devotedly it has discharged its duty. Having thus gained public support, the profession's voice in legislative halls will then be heard."

The success that has come to the medical profession, excepting in public health work, has in no way been dependent upon printers' ink. How much more useful we could have been, had we em-

ployed it judiciously no one knows. Most of us shrink from publicity, because of life training and the traditions of our forefathers; but new environments are here, new forces acting, we must change our tactics to meet the times. The persistent propaganda of obstruction and destruction to public welfare by various charlatans and ignoramuses must be antagonized and neutralized by the same means. The American Medical Association through its educational campaign put the proprietary medical college out of business, and tripled the requirements for obtaining the right to practice medicine, it also put out of business the proprietary medical journals which were published to advertise proprietary medicines and to publish "original" papers whose therapy largely consisted of the proprietary medicines it advertised. Hospital standardization was next undertaken. Here reforms and safeguards for the sick were instituted in a like thorough matter. The reforms accomplished in the profession have been incalculable. The American Medical Association has published a number of pamphlets on health matters and subjects of general interest, but for professional readers only. It seems to me that this national body's next task should be to make available to the public certain of its vast stores of interesting facts. Just how this should be done, I'm unable to say. But we have the goods and the public wants them. Locally we should make contact with the daily press through health commissioners or executive secretaries, and this should be done with sole interest of placing our truths before the people, for their benefit. We should identify ourselves with the various civic bodies and be men among men, and under proper conditions be willing to advise and direct them in matters pertaining to the public good.

The Ohio State Medical Association is employing a business manager in the form of a lay executive secretary. This was in the first place an accident, being an evolution from an editor employed for the State Journal. But they builded wiser than they knew, and our relatively strong position in the state is largely due to his publicity and managerial work for us. The Cleveland Academy of Medicine the past year has followed the lead of the State Association and employed a full time executive secretary. They report many encouraging signs. The Cleveland Academy is now a factor in city government as never before. It is the hope of many that soon each county or councilor district may have the benefits of a full time executive secretary. This is but the beginning of our medical publicity and the beginning revolution or evolution from the old time order of medical isolation and secrecy. When we shall have attained a just publicity we shall need concern ourselves no further about the menace to the state of the cult, because "there won't be any," nor will attempts be made to tear down the medical profession by ingrafting German insurance schemes. But on the contrary, the state

will realize that its health and efficiency depend upon the efficiency of the medical profession. Then will the tables be turned and the state will become our guardians. Shall we drink the cup

of hemlock, or will we let the world know what we're doing and come into the fullest realization of our heritage, as guardians of the public welfare?

DEATHS IN OHIO

Mary Emma Cadwallader, M.D., Laura Memorial Woman's Medical College, Cincinnati, 1900; aged 60, member of the Ohio State Medical Association; died April 24 at the Dayton State Hospital, where she had been a member of the staff for 20 years. Dr. Cadwallader is survived by a sister and two brothers.

Lewis D. Coy, M.D., Eclectic Medical College, Cincinnati; 1876; aged 73; died at his home in Canfield, April 12. Dr. Coy practiced medicine in Canfield and vicinity for 40 years, retiring several years ago because of the infirmities of age. He was a veteran of the Civil War. He leaves a son, Dr. W. D. Coy, Youngstown.

Henry F. Held, M.D., Cincinnati College of Medicine and Surgery, 1889; aged 60; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Cincinnati, April 30. Dr. Held had been a practitioner in Cincinnati for more than 30 years.

James A. Hubbell, M.D., Starling Medical College, Columbus, 1871; aged 77; died at his home in Quincy, April 5. Dr. Hubbell started his medical practice in Quincy and continued there until the time of his death. He is survived by one son.

Frank R. Loomis, M.D., Cleveland University of Medicine and Surgery, 1882; aged 68; died at his home in Jefferson, April 25, from apoplexy. Dr. Loomis located in Jefferson immediately after his graduation from college and continued practice there throughout the 39 years of his professional career. He is survived by his wife, Dr. Alice Loomis, and one daughter.

Albert McClintock, M.D., Columbus Medical College, 1888; aged 67; died at his home in New Moorefield, April 21, from paralysis. Dr. McClintock had lived in New Moorefield for 32 years. Besides his wife, he leaves a daughter and two sons.

Samuel O'Dell, M.D., Toledo Medical College, Toledo, 1884; aged 66; member of the Ohio State Medical Association; died March 20, from injuries sustained when his automobile was struck by a passenger train. Dr. O'Dell's home was at

Swanton, Fulton County, where he practiced for about 35 years.

Alfred M. Potter, M.D., Eclectic Medical College, Cincinnati, 1872; aged 71; died at his home in Springfield, May 5. Dr. Potter was one of the oldest practitioners in the city in which he made his home. Dr. A. H. Potter, Springfield, is a son of the deceased.

Frank H. Rowe, M.D., Miami Medical College, Cincinnati, 1873; aged 73; died at his home in Cincinnati, May 4. Dr. Rowe practiced medicine in Cincinnati for more than 40 years.

Charles Collins Stuart, M.D., Western Reserve University School of Medicine, 1895; aged 54; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Cleveland, April 11. Dr. Stuart was ophthalmologist to the German City and Charity Hospitals, Cleveland.

M. Herbert Westbrook, M. D., Cleveland-Pulte Medical College, 1899; aged 62; died of heart disease, March 22, while making a visit to a patient in Brecksville. Dr. Westbrook's home was in Olmstead Falls and he had been a practitioner in that village, Berea and Brecksville for more than 15 years. His widow survives.

Work in Behalf of Crippled Children

The eighth and largest to date of the crippled children's clinics being conducted by state and local health authorities in cooperation with county medical societies and Rotary Clubs, was held, May 10, at Van Wert. Sixty-one orthopedic and ten general cases were examined.

More than 250 crippled children have been examined in the seven counties where clinics have been held in the past few months. Operations and other necessary treatments have been recommended by examining physicians and in several localities plans are being matured to finance operations in indigent cases. Portage County has had two clinics and the following counties have had one each: Coshocton, Shelby, Morgan, Licking and Van Wert.

Unusual public interest in the crippled children's program was reported from both Licking and Van Wert Counties, the scenes of the most recent clinics. A large attendance of physicians marked the clinics in both counties. Dr. A. M. Steinfeld of Columbus, served as consulting orthopedist at these clinics.

Annual Election, Action on Resolutions, Committee Reports and Official Decisions on Important Matters Featured Sessions of House of Delegates

PROCEEDINGS OF THE HOUSE OF DELEGATES OF THE
OHIO STATE MEDICAL ASSOCIATION, COLUMBUS,
MAY 3 AND 4, 1921

FIRST SESSION

The first session of the House of Delegates of the Ohio State Medical Association was called to order by the president, Dr. Charles Lukens, in Post Room No. 1, Memorial Hall, Columbus, Ohio, Tuesday morning, May 3, 1921, at 11:00 o'clock.

Fifty-three delegates and officers responded to roll call, which was a majority of delegates registered. (See tabulation on page 418, in which those in attendance at this session are marked "present.")

Dr. Upham moved that the president appoint three reference committees, one for consideration of the president's address; one for consideration of resolutions introduced in the House of Delegates, and the third for consideration of the published reports of the standing committees.

Motion was seconded by Dr. McGavran of Columbus, and carried.

President Lukens announced the following appointments: Committee for consideration of the president's address, Drs. J. H. J. Upham, Columbus; E. W. Tidd, Beaver; E. O. Smith, Cincinnati. Committee on Resolutions, Drs. J. C. Tritch, Findlay; M. A. Tate, Cincinnati; George E. Follansbee, Cleveland. Committee on Standing Committees' Reports, Drs. Gainor Jennings, West Milton; J. C. Larkin, Hillsboro; C. L. LaMont, Canton.

On motion of Dr. Upham, seconded and carried, the minutes of the House of Delegates in annual session at Toledo, June 1 and 2, 1920, were approved as published in *The Journal*, July, 1920.

Dr. Jennings introduced the following resolution:

"Whereas; The law of this nation no longer recognizes as legitimate any beverage spirits, and

"Whereas, Undenatured ethyl alcohol has a legal and proper place in legitimate industry in connection with chemical, pharmaceutical or medical products, it is no longer proper that this product should be taxed 1000 per cent. of its value; and,

"Whereas, Narcotics are now properly tax free although they sometimes find their way into illicit use, the same as alcohol, in spite of careful precaution of those interested in their legitimate use; and,

"Whereas, Such tax is no aid in the enforcement of prohibition laws and regulations, but rather has resolved itself into a penalty of \$4.40 per gallon upon those who have occasion to use such undenatured alcohol in legitimate manufacturing or other processes; and,

"Whereas, Through foreign competition chemicals and pharmaceuticals from other nations where there is no federal tax on alcohol are able to compete to the detriment of American enterprise, and in the end the ultimate user pays the tax, often increased many fold, and in view of the fact that all tincture and most other medicinal liquids contain much alcohol, with a resultant financial burden on the sick, and mostly upon the sick poor. Therefore, be it

"Resolved: That the Ohio State Medical Association believes that the federal tax on undenatured ethyl alcohol has outlived its usefulness; that such tax is a tax on the sick

and on legitimate users thereof, and that the Ohio State Medical Association respectfully requests that our Senators and Representatives in Congress use their best endeavors to the end that the law and regulations taxing ethyl alcohol may be abolished, and that a copy of these resolutions be sent to each United States Senator and Representative from Ohio, and that the Ohio delegates and alternates to the American Medical Association meeting in Boston, for formal action memorializing Congress to thus act.

Submitted by Gainor Jennings, delegate from Miami County."

On motion of Dr. Upham, seconded and carried, the resolution presented by Dr. Jennings, was referred to the Committee on Resolutions.

The following resolution was presented by Dr.

OFFICERS 1921-22

PRESIDENT

Wells Teachnor, M.D. Columbus

PRESIDENT-ELECT

Robert Carothers, M.D. Cincinnati

PRESIDENT-EMERITUS

Augustus Ravogli, M.D. Cincinnati

TREASURER

H. M. Platter, M.D. Columbus

COUNCILORS BY DISTRICTS

1. W. D. Haines, M.D., (new)....Cincinnati
2. M. F. Hussey, M.D., (new).....Sidney
3. R. R. Hendershott, M.D. Tiffin
4. C. W. Waggoner, M.D. (new).....Toledo
5. R. K. Updegraff, M.D. Cleveland
6. D. W. Stevenson, M.D., (new).....Akron
7. J. S. McClellan, M.D. Bellaire
8. E. R. Brush, M.D., (new).....Zanesville
9. J. S. Rardin, M.D. Portsmouth
10. S. J. Goodman, M.D. Columbus

Upham, in compliance with a request from the National Anesthesia Research Society:

"Whereas, The safety of patients, the advance of surgery and the requirements of hospital service demand the rapid extension of the specialty of anesthesia. Therefore, be it,

"Resolved, That the Ohio State Medical Association hereby petitions and urges the House of Delegates and the Council on Scientific Assembly to establish a Section on Anesthesia in the American Medical Association during the Boston meeting, June, 1921."

On motion of Dr. Upham, seconded and carried, the resolution was referred to the Committee on Resolutions.

On separate motions, duly seconded, the following nominations were made for the Nominating Committee:

First District—Dr. E. O. Smith, Cincinnati.

Second District—Dr. Gainor Jennings, West Milton.

Third District—Dr. E. H. Porter, Tiffin.

Fourth District—Dr. R. L. Bidwell, Toledo.

Fifth District—Dr. S. L. Bernstein, Cleveland.

Sixth District—Dr. D. H. Morgan, Akron.

Seventh District—Dr. Clyde Kirkland, Bellaire.

Dr. H. M. Hazelton, Lancaster, and Dr. F. M.

Mitchell, Cambridge, were placed in nomination for member of the Nominating Committee from the Eighth District. The nominations were thereupon closed. A rising vote was taken which resulted as follows: Dr. Hazelton, 24; Dr. Mitchell, 13. On motion of Dr. Mitchell, Dr. Hazelton was declared unanimously elected.

On separate motions, seconded and carried, Dr. S. S. Halderman, Portsmouth, was elected as a member of the Nominating Committee for the Ninth District, and Dr. John B. Alcorn, Columbus, for the Tenth District.

The president, Dr. Lukens, appointed Dr. E. O. Smith as temporary chairman of the Nominating Committee, with instructions to meet after adjournment of this session of the House of Delegates.

REPORTS OF OFFICERS

Dr. H. M. Platter, Columbus, treasurer of the State Association, stated that the annual report of the treasurer was published in the May issue of *The Journal*, and comprised a statement from the certified accountant to the effect that the books were in balance. As a supplement to the published report, Dr. Platter called attention to the fact that the finances of the Association show a balance on hand April 30, 1921, of \$24,596.40, which is in the form of a checking account of \$9,596.40, and certificates of deposit of \$15,000.

On motion of Dr. Bonifield, Cincinnati, seconded and carried, the report of the treasurer was approved.

On motion of Dr. S. J. Goodman, Columbus, seconded and carried, the reports of the councilors for their respective districts were accepted as published in the May issue of *The Journal*.

Dr. Upham, chairman of the Committee on Public Policy and Legislation submitted the following supplement to the published report:

"One word more, before closing this report. I wish to pay a heartfelt tribute to our executive secretary, Don K. Martin, whose energy, tact, loyalty to our association, whose keen perception of, and sympathy with the ideals, whose excellent judgment and untiring watchfulness, all combined to make him the dominant factor in bringing about the successful campaign of which we may feel proud this year.

"The committee dictated the policy, but Mr. Martin, with the splendid cooperation of the auxiliary committeemen over the state, put it across, and in simple justice, let credit be given where credit is due."

Dr. Goodman moved that the supplemental report be added to the published report of the Committee on Public Policy and Legislation. Seconded and carried.

Dr. Upham moved that the reports of the various standing committees, as published in the May issue of *The Journal*, be referred to the Reference Committee on Reports of Standing Committees. Motion seconded by Dr. Goodman and carried.

Dr. Goodman, Columbus, offered the following,

in response to a request from the president, Dr. Lukens, for supplementary reports:

"As chairman of the Committee on Auditing and Appropriations, it has been my pleasure to O.K. bills which have been paid to lawyers for medical defense. It seems to me it is one of the most urgently important questions, when the delegates go back to their respective constituencies to impress upon members the value of paying up their dues and keeping up this large fund which we have started for the benefit of medical defense. It would surprise you to know that six hundred, five hundred, three hundred dollars are paid in lump sums to attorneys for the defense of physicians in unfair law suits. This cannot be done, of course, unless the dues are paid. But it has appealed to me since I have been chairman of this committee in approving these bills that our Defense Committee and the defense proposition is one of the most wonderful and most important parts of our society, and I hope that the delegates will be impressed with the fact and impress it upon the members of their societies."

Dr. Wells Teachnor, president-elect, and chairman of the General Secretaries Committee:

"I just want to say a word in regard to the General Secretaries Committee, not as an additional report, because our report appears in the last issue of *The Journal*. The General Secretaries Committee has been a lost activity in this association for the past five or six years. I have made a conscientious attempt this year to reorganize the secretaries, because I consider them a most substantial factor in our organization. We held a meeting during January which was attended by over 20 secretaries. It was a very successful meeting, and we have supplemented this by calling a meeting for luncheon tomorrow at the Elks' Club, and I want to insist that all of the secretaries in attendance be present at that meeting. I think it is going to be a splendid meeting, and we will all probably get some new ideas as to how to carry on the activities of the Association.

No further reports were offered.

On motion of Dr. Goodman, seconded and carried, the House of Delegates adjourned to meet Wednesday afternoon, May 4, 1921, at 1:30 o'clock.

SECOND SESSION

The second session of the House of Delegates was called to order at 1:30 p. m., Wednesday, May 4, 1921, by President Lukens.

The roll call showed 95 delegates and officers present and responding to their names. (For these present see tabulation on page 418.)

The first order was the report of the Nominating Committee. Dr. Smith submitted the following report of the Committee:

For President-elect—Dr. Robert Carothers, Cincinnati; Dr. E. M. Huston, Dayton; Dr. G. E. Robbins, Chillicothe.

Committee on Public Policy and Legislation—Dr. J. H. J. Upham, Columbus; Dr. A. H. Freiberg, Cincinnati; Dr. J. B. Alcorn, Columbus.

Publication Committee—Dr. L. L. Bigelow, Columbus; Dr. D. V. Courtright, Circleville; Dr. Otto P. Geier, Cincinnati.

Members of the Committee on Medical Defense (for two year term)—Dr. W. H. Snyder, Toledo. Committee on Medical Economics—Dr. H. L.

Sanford, Cleveland; Dr. Webster Smith, Dayton; Dr. J. S. Cherrington, Logan.

For Councilors (term of two years)—Second District, Dr. M. F. Hussey, Sidney; Fourth District, Dr. C. W. Waggoner, Toledo; Sixth District, Dr. D. H. Morgan, Akron; Eighth District, Dr. E. R. Brush, Zanesville; Tenth District, Dr. S. J. Goodman, Columbus.

The Nominating Committee also has the privilege of nominating for your consideration, Dr. Samuel St. John Wright of Akron, for the position of President-Emeritus.

Respectfully submitted,

(Signed by the Committee.)

On motion of Dr. Upham, seconded and carried, the report of the Nominating Committee was received.

On motion, seconded and carried, the president appointed the following tellers: Dr. J. A. Weitz, Montpelier; Dr. C. L. Bonifield, Cincinnati; Dr. C. W. McGavran, Columbus; Dr. Dana O. Weeks, Marion, and Dr. H. J. Powell, Bowling Green.

The ballot was thereupon taken and resulted as follows: Carothers, 58; Huston, 12; Robbins, 20. Dr. Carothers was declared elected.

On motion of Dr. Jennings of West Milton, seconded and carried, the election of Dr. Carothers, as president-elect, was made unanimous.

There being no further nominations from the floor, on separate motions, duly seconded and carried, the rules were suspended and the secretary instructed to cast the unanimous ballot of the House of Delegates for the remainder of the nominations.

The secretary then cast the ballot as directed, and the chair declared candidates unanimously elected, as follows:

Committee on Public Policy and Legislation—Dr. J. H. J. Upham, Columbus; Dr. A. H. Freiberg, Cincinnati; Dr. J. B. Alcorn, Columbus.

Publication Committee—Dr. L. L. Bigelow, Columbus; Dr. D. V. Courtright, Circleville; Dr. Otto P. Geier, Cincinnati.

Committee on Medical Defense (for two year term)—Dr. W. H. Snyder, Toledo.

Committee on Medical Economics—Dr. H. L. Sanford, Cleveland; Dr. Webster Smith, Dayton; Dr. J. S. Cherrington, Logan.

Councilors:

Second District—Dr. M. F. Hussey, Sidney.

Fourth District—Dr. C. W. Waggoner, Toledo.

Sixth District—Dr. D. H. Morgan, Akron, the nominee for the office of Councilor of the Sixth District requested that his name be withdrawn as a candidate.

Dr. Jennings, West Milton, moved that the resignation of Dr. Morgan be accepted. Seconded. A rising vote was called for, which resulted as follows: Ayes, 46; nays, 10. Motion carried.

Dr. Morgan moved that Dr. D. W. Stevenson, Akron, be nominated as Councilor for the Sixth District. Motion seconded and carried.

On motion of Dr. E. J. March, Canton, seconded and carried, the secretary was instructed to cast the ballot for Dr. Stevenson.

On separate motions, duly seconded and carried, the rules were suspended and the secretary instructed to cast the unanimous ballot of the House of Delegates for the following councilors:

Eighth District—Dr. E. R. Brush of Zanesville.

Tenth District—Dr. S. J. Goodman of Columbus.

For President-Emeritus, the name of Dr. Samuel St. John Wright, Akron, was presented by the Nominating Committee, and Dr. Bonifield, Cincinnati, presented the name of Dr. Augustus Ravogli, Cincinnati.

Dr. Jennings (a member of the Nominating Committee), moved that the name of Dr. S. St. John Wright be withdrawn as a candidate for President-Emeritus. Motion seconded by Dr. Jones, Painesville.

Dr. S. L. Bernstein, Cleveland, asked for a ruling on the motion. The president ruled that the House of Delegates accept the withdrawal; otherwise a ballot would be necessary.

The motion by Dr. Jennings, seconded by Dr. Jones, was unanimously carried.

Dr. Morgan, Akron, moved that the rules be suspended and the secretary be instructed to cast the unanimous ballot for Dr. Ravogli, Cincinnati, for the office of President-Emeritus.

Motion seconded and unanimously carried.

On motion by Dr. Upham of Columbus, seconded and carried, the president appointed a committee to find Dr. Ravogli and Dr. Carothers and bring them before the House of Delegates.

Dr. E. O. Smith of Cincinnati, on behalf of the Academy of Medicine of Cincinnati, extended an invitation to the Association to meet in Cincinnati in 1922, and read the following telegram from the Cincinnati Chamber of Commerce:

"Cordial invitation extended Ohio State Medical Association by the mayor, the Hotel Association and Chamber of Commerce to hold the next annual convention in Cincinnati. Authorize you to extend invitation on our behalf. Pledge full support and cooperation."

On motion of Dr. Smith, seconded by Dr. Jennings, and unanimously carried, the next annual meeting of the State Association will be held in Cincinnati.

At this point, Dr. Carothers, the president-elect was escorted into the room, and responded to an ovation in the followings words:

"Gentlemen, I always thought I had a good many friends, but I did not know that I had quite as many friends as I have. I sincerely and honestly, and from my heart thank you very much for the honor you have bestowed on me. I think it is a recognition and a payment for some services which I have rendered you in the last twelve years. I have been in your Council now twelve years. During that time I have estimated that at a rather low average I have given fifteen days a year to Councilor and Association work. Multiply that by twelve and it is 180 days. Divide that by 30, 30 days to the month, and you have six months. So that I believe that I have given your society six months of my life. I am glad that I have done it, it has been a very great pleasure to me. It has been a very great privilege."

lege to me in many, many ways. They say that every man should have a hobby, but woe be unto the man who gets the wrong hobby. The State Association has been my hobby. I have greatly loved the state society and I have loved to work in it, and have worked, I think, honestly and conscientiously for your betterment. I am not a bit ashamed of the Ohio State Medical Association. I think it is really quite wonderful. It is recognized, I believe, by the American Medical Association as being the very best state organization in the United States, and I think that is quite correct. We councilors have done a lot of work toward making it so. I thank you very, very much, and I will see you in Cincinnati next year year. I can assure you that we will make a very great effort—although we have a big job ahead of us—to have a meeting in Cincinnati next year equally as good as this meeting, and the previous one have been. As soon as I go home, I am going to have Dr. E. Otis Emith made chairman of a committee, and he is a dependable wheel horse on occasions of that kind. We will make every effort to give you a smoker that will be the equal of the one last night. I thank you very, very much."

Dr. Smith, chairman of the Nominating Committee, called attention to the vacancy in the First Councilor District, by the election of Dr. Carothers as president-elect. Dr. Schwab, Cincinnati, moved that Dr. W. D. Haines be nominated to serve the unexpired term of Dr. Carothers, as councilor of the First District. Nomination seconded.

On motion of Dr. Weitz, Montpelier, seconded and carried, the secretary was instructed to cast the unanimous ballot of the delegates for Dr. Haines.

MISCELLANEOUS BUSINESS

The president called for the reports of the special Reference Committees appointed at the first session of the House of Delegates.

On behalf of the Committee on the President's Address, Dr. Upham presented the following report:

May 4, 1921.

To the House of Delegates:

Your committee has given serious consideration to the suggestions embodied in the President's address concerning publicity of medical achievements, and feels that the idea suggested and the principle advocated if properly carried out, would be of the greatest value to the public and of great service to our profession.

The great difficulty involved would be in the avoidance of inter-professional criticism, which might arise from attempts at personal aggrandizement and prominence which, it must be admitted, might be attempted if an indiscriminate course of publicity were encouraged.

On the other hand, if the great educational value of the public press could be utilized in presenting impersonally the medical advances from time to time, your committee believes much could be done to combat the extravagant claims of alleged cure-alls and pseudo-scientific discoveries

STANDING COMMITTEES

(Elected)

COMMITTEE ON PUBLIC POLICY AND LEGISLATION		
J. H. J. Upham, M.D., Chairman	-----	Columbus
A. H. Freiberg, M.D.	-----	Cincinnati
J. B. Alcorn, M.D.	-----	Columbus
Wells Teachnor, M.D.	-----	Columbus
Robert Carothers, M.D.	-----	Cincinnati
Don K. Martin	-----	Columbus
PUBLICATION COMMITTEE		
L. L. Bigelow, M.D., Chairman	-----	Columbus
D. V. Courtright, M.D.	-----	Cincinnati
Otto P. Geier, M.D.	-----	Cincinnati
COMMITTEE ON MEDICAL DEFENSE		
J. E. Tuckerman, M.D., Chairman	-----	Cleveland
C. T. Souther, M.D.	-----	Cincinnati
W. H. Snyder, M.D.	-----	Toledo
COMMITTEE ON MEDICAL ECONOMICS		
H. L. Sanford, M.D., Chairman	-----	Cleveland
Webster Smith, M.D.	-----	Dayton
J. S. Cherrington, M.D.	-----	Logan
(Appointed by President)		
COMMITTEE ON MEDICAL EDUCATION		
E. F. McCampbell, M.D., Chairman	-----	Columbus
Martin Fischer, M.D.	-----	Cincinnati
Harold N. Cole, M.D.	-----	Cleveland
GENERAL SECRETARIES COMMITTEE		
C. I. Kuntz, M.D.	-----	Freemont
A. F. Sarver, M.D.	-----	Greenville
Nelia B. Kennedy, M.D.	-----	Findlay
Robert Carothers, M.D.	-----	Cincinnati
COMMITTEE ON AUDITING AND APPROPRIATIONS		
S. J. Goodman, M.D., Chairman	-----	Columbus
J. S. McClellan, M.D.	-----	Bellaire
J. S. Rardin, M.D.	-----	Portsmouth

SPECIAL COMMITTEES

(Appointed by President)

COMMITTEE ON CONTROL OF CANCER		
Andre Crotti, M.D., Chairman	-----	Columbus
Charles W. Moots, M.D.	-----	Toledo
Louis Ransohoff, M.D.	-----	Cincinnati
Frank E. Bunts, M.D.	-----	Cleveland
COMMITTEE ON CRIPPLED CHILDREN		
B. G. Chollett, M.D., Chairman	-----	Toledo
A. H. Freiberg, M.D.	-----	Cincinnati
A. M. Steinfeld, M.D.	-----	Columbus
COMMITTEE ON HOSPITAL STANDARDIZATION		
C. D. Selby, M.D., Chairman	-----	Toledo
S. S. Halderman, M.D.	-----	Portsmouth
John C. Tritch, M.D.	-----	Findlay

which deceive the credulous public and impose so cruelly upon the sick and suffering.

We recommend that the Council be instructed to take this matter under consideration and weigh the possibilities of providing for a Bureau of Publicity which may develop a plan of systematic information along the lines suggested by the president.

(Signed)

Committee on President's Address,
J. H. J. Upham,
E. W. Tidd,
E. O. Smith.

It was moved and seconded that the report be adopted.

Dr. Follansbee of Cleveland, chairman, presented the following report on behalf of the Reference Committee on Resolutions:

To the President of the House of Delegates:

The Reference Committee on Resolutions has considered the following resolution and finds it meritorious:

"Whereas, The safety of patients, the advance of surgery and the requirements of hospital service demand the rapid extension of the specialty of anesthesia. Therefore, be it

"Resolved, That the Ohio State Medical Association hereby petitions and urges the House of Delegates and the Council on Scientific Assembly to establish a Section on Anesthesia in the American Medical Association during the Boston meeting, June, 1921."

We, therefore, recommend its adoption.

The following resolution requesting Congress to remove the tax on ethyl alcohol should by all means be adopted:

"Whereas, The law of this nation no longer recognizes as legitimate any beverage spirits; and,

"Whereas, Undenatured ethyl alcohol has a legal and proper place in legitimate industry in connection with chemical, pharmaceutical or medical products, it is no longer proper that this product should be taxed 1000 per cent. of its value; and,

"Whereas, Narcotics are now properly tax free although they sometimes find their way into illicit use, the same as alcohol, in spite of careful precaution of those interested in their legitimate use; and

"Whereas, Such tax is no aid whatever in the enforcement of prohibition laws and regulations, but rather has resolved itself into a penalty of \$4.40 per gallon upon those who have occasion to use such undenatured alcohol in legitimate manufacturing or other processes; and,

"Whereas, Through foreign competition chemicals and pharmaceuticals from other nations where there is no federal tax on alcohol are able to compete to the detriment of American enterprise, and in the end the ultimate user pays the tax, often increased many fold, and in view of the fact that all tinctures and most other medicinal liquids contain much alcohol, with a resultant financial burden on the sick, and mostly upon the sick poor. Therefore, be it

"Resolved, That the Ohio State Medical Association believes that the federal tax on undenatured ethyl alcohol has outlived its usefulness; that such tax is a tax on the sick and on legitimate users thereof, and that the Ohio State Medical Association respectfully requests that our Senators and Representatives in Congress use their best endeavors to the end that the law and regulations taxing ethyl alcohol may be abolished, and that a copy of these resolutions be sent to each United States Senator and Representative from Ohio, and that the Ohio delegate and alternates to the American Medical Association are hereby instructed to work for the adoption by the House of Delegates at the American Medical Association meeting in Boston, for formal action memorializing Congress to thus act.

"Submitted by Gaior Jennings, delegate from Miami County."

(Signed)

Committee on Resolutions,
J. C. Tritch,
George Edward Follansbee,
Magnus A. Tate.

On motion by Dr. Follansbee, duly seconded and carried, the report of the Reference Committee on Resolutions, was adopted.

Dr. Jennings, West Milton, chairman, presented the following report on behalf of the Reference Committee on Reports of Standing Committees:

The Reference Committee on Standing Committee reports recommends the adoption of the reports published in the May issue of *The Ohio State Medical Journal* of the following committees:

On Public Policy and Legislation; Hospital Standardization; Auditing and Appropriation; Publication; Health Education; Medical Education; General Secretaries; Control of Cancer, Medical Defense.

The Committee also recommends adoption of the accountant's report of *The Journal* for year ending December 31, 1921.

The adoption of the supplement to the report of the Committee on Public Policy and Legislation as submitted by Dr. Upham is recommended.

The committee does not concur in partial report of the Special Committee on Anesthesia Survey, as published in April, 1921, *Journal*.

(Signed)

Reference Committee on Standing Committee Reports.

Gaior Jennings, Chairman.

Dr. McGavran, Columbus, moved that the report of the Reference Committee on Reports of Standing Committees, as presented by Dr. Jennings, be adopted. Motion seconded and carried.

Dr. Smith, Cincinnati, presented the following

resolution adopted by the Section on Dermatology, Proctology and Genito-Urinary Surgery:

"Resolved, That the Section on Dermatology, Proctology and Genito-Urinary Surgery be abolished, and that the By-Laws be so amended." (Signed by Dr. E. O. Smith and Dr. Hugh Baldwin.)

The president announced that the amendment would take its regular course and come up for action next year.

Dr. Upham, chairman, presented the following communication from the Committee on Public Policy and Legislation:

May 4, 1921.

To the House of Delegates:

The auxiliary Legislative Committee in session Tuesday, May 3, 1921, voted its approval of Senate Bill No. 184, now pending in the State Legislature, which repeals the law authorizing registered nurses to administer anesthetics.

The consensus of opinion was that the administration of anesthetics should be by adequately trained graduates of medicine.

In reporting this action, the Committee asks for instructions from the House of Delegates, and respectfully suggests that the Ohio State Medical Association shall encourage the development of trained anesthetists among physicians.

(Signed)

Committee on Public Policy and Legislation,
J. H. J. Upham, Chairman.

Dr. Jennings asked that the Committee on Public Policy and Legislation be instructed in accordance with the communication just read by Dr. Upham, and moved that Senate Bill No. 184, which is now pending in the House of Representatives, and is in the Committee on Public Health, be endorsed by this House of Delegates, and the Committee on Public Policy and Legislation be instructed to support it. Motion seconded.

The motion was discussed by Dr. Follansbee, Cleveland; Dr. McLean, Dayton; Dr. Carter, West Manchester; Dr. Millikin, Hamilton; Dr. Bonifield, Cincinnati.

Dr. Follansbee moved that the motion be amended to exclude the last clause, directing the committee to appear in the legislative bodies in favor of Senate Bill No. 184.

Motion seconded. Motion to amend lost.

Dr. Follansbee called for a roll call on the original motion, which resulted as follows: Yeas, 63; nays 10, as follows:

Those voting in favor of motion by Dr. Jennings:
Adams County—O. B. Kirkpatrick.
Allen—T. R. Thomas.
Belmont—Clyde Kirkland.
Brown—A. W. Francis.
Champaign—D. C. Houser.
Clark—J. J. Moore.
Clermont—F. A. Ireton.
Clinton—E. C. Briggs.
Columbiana—J. S. McCulloch.
Crawford—H. H. Hartman.
Darke—S. A. Hawes.
Erie—Charles Graefe.
Franklin—C. W. McGavran, J. H. U. Upham, John M. Thomas.
Fulton—R. W. Reynolds.
Greene—R. H. Grube.
Guernsey—F. M. Mitchell.
Hamilton—M. A. Tate, C. L. Bonifield, E. O. Smith, W. H. Peters, L. Schwab.
Henry—O. L. Norris.
Highland—L. Nelson.
Hocking—M. H. Cherrington.
Licking—W. E. Boyer.
Logan—W. C. Pay.
Lucas—C. W. Waggoner, L. A. Levison, R. L. Bidwell, B. Gillette.

Mahoning—S. M. Hartzell.
 Marion—Dana O. Weeks.
 Mercer—F. E. Ayers.
 Miami—Gainor Jennings.
 Montgomery—C. C. McLean.
 Morgan—Louis Mark.
 Morrow—R. L. Pierce.
 Muskingum—D. J. Matthews.
 Ottawa—A. A. Brindley.
 Paulding—C. E. Huston.
 Pike—E. W. Tidd.
 Pickaway—Howard Jones.
 Preble—S. P. Carter.
 Ross—R. E. Bower.
 Sandusky—C. L. Kuntz.
 Scioto—S. S. Halderman.
 Seneca—J. D. Howe.
 Shelby—M. F. Hussey.
 Stark—B. C. Barnard, C. A. LaMont.
 Summit—D. H. Morgan, L. E. Brown.
 Trumbull—R. R. Rogers.
 Tuscarawas—A. C. Dempster.
 Williams—J. A. Weitz.
 Wood—H. J. Powell.
 Councilors—Hendershott, Keller, March, Rardin, Goodman.
 Those voting against motion by Dr. Jennings:
 Butler—Mark Millikin.
 Coshocton—E. C. Carr.
 Cuyahoga—G. E. Follansbee, S. L. Bernstein, S. S. Berger,
 M. A. Blankenhorn, P. A. Jacobs, H. E. Prayzek.
 Mahoning—W. E. Ranz.
 Union—C. D. Mills.

NEW SECTION OFFICERS

MEDICINE

Chairman.....C. L. Cummer, M.D.
 Rose Building, Cleveland
 Secretary.....Julian Benjamin, M.D.
 4 West Seventh St., Cincinnati

SURGERY

Chairman.....F. C. Herrick, M.D.
 Rose Building, Cleveland
 Secretary.....Howard Stitt, M.D.
 Washington C. H., Ohio

OBSTETRICS AND PEDIATRICS

Chairman.....Walter W. Brand, M.D.
 Colton Building, Toledo
 Secretary.....G. W. Brehm, M.D.
 677 North High St., Columbus

EYE, EAR, NOSE AND THROAT

Chairman.....Thomas Hubbard, M.D.
 Nicholas Building, Toledo
 Secretary.....W. W. Alderdyce, M.D.
 513 Madison Avenue, Toledo

DERMATOLOGY, PROCTOLOGY AND GENITO- URINARY SURGERY

Chairman.....Augustus Ravogli, M.D.
 5 Garfield Place, Cincinnati
 Secretary.....Hugh Baldwin, M.D.
 347 East State St., Columbus

NERVOUS AND MENTAL DISEASES

Chairman.....Charles W. Stone, M.D.
 Rose Building, Cleveland
 Secretary.....G. G. Kineon, M.D.
 State Hospital, Gallipolis

HYGIENE AND SANITARY SCIENCE

Chairman.....R. R. Richison, M.D.
 City Health Department, Springfield
 Secretary.....Arlington Ailes, M.D.
 Sidney, Ohio

and Legislation be authorized to pay from the treasury of the State Association, the expenses of auxiliary legislative committeemen, when called to Columbus for conference with the Committee.

After discussion by Dr. Upham, Dr. Rardin, and Dr. Jennings, Dr. Schwab, Cincinnati, moved that the resolution be laid on the table. Motion seconded and carried.

Dr. Smith, Cincinnati, moved that the House of Delegates, representing the Ohio State Medical Association, offer a vote of thanks to the members of the Columbus Academy of Medicine for the excellent manner in which they entertained physicians in attendance at this meeting. Motion seconded and carried.

Dr. Carothers, as President-elect, and Dr. Hussey as Councilor for the Second District, were thereupon installed by President Lukens. (The newly elected Councilors for the Fourth, Sixth, Eighth and Tenth Districts being absent at this time.)

Dr. Lukens, in retiring, stated:

"Each year, gentlemen, I become prouder that I am a Doctor of Medicine. The past year has been the proudest one of my life. I am proud I was born in Ohio, proud that I had sense enough to stay in Ohio. But the pride which comes from the privilege of being the executive head of one of the largest and most influential state organizations in the United States fills me beyond the power of expressing myself. I may have made my mistakes, but I tried to give all a square deal and not be guilty of executive usurpation. I feel highly gratified to be able to turn over the gavel of the Association with the organization in stronger position now than ever before. We have been able to keep out destructive forces which one or two years ago menaced our usefulness. That has not been the result of the work of one man or of one group, but the combined work of this body, backed up by the state legislative committeemen and the membership at large.

"Gentlemen, I congratulate you and thank each and every one of you for your cooperation, and especially the local committee for their splendid work during this convention. I now take pleasure in turning the gavel over to one who is safe and sane, to one who has worked long and tirelessly in our midst, and to one who is deserving of the honor which comes with it. Gentlemen, your new president."

Dr. Teachnor, in accepting the chair as president, thanked the House of Delegates for the honor bestowed on him. He spoke briefly of the many difficult problems which the profession has faced recently, and pledged his best efforts to fulfill the trust placed in him as the Association's chief executive during the coming year.

Dr. Bonifield, Cincinnati, moved that a vote of thanks to be extended the retiring president for his excellent conduct of the affairs of this meet-

Dr. Morgan, Akron, offered a resolution requesting that the Committee on Public Policy

and for his untiring efforts in behalf of the Association. Motion seconded and unanimously carried by rising vote.

There being no further business to come before the House of Delegates, the meeting was, on motion, adjourned.

House of Delegates Roll Call

County	Delegate	May 3	May 4
Adams	O. B. Kirkpatrick	Present	Present
Allen	T. R. Thomas	Present	Present
Athens	C. S. McDougall	Present	Present
Auglaize	H. S. Noble	Present	Present
Belmont	Clyde Kirkland	Present	Present
Brown	A. W. Francis	Present	Present
Butler	Mark Millikin	Present	Present
Champaign	D. C. Houser	Present	Present
Clark	J. J. Moore	Present	Present
Clermont	F. A. Ireton	Present	Present
Clinton	E. C. Briggs	Present	Present
Columbiana	J. S. McCulloch	Present	Present
Coshocton	E. C. Carr	Present	Present
Crawford	H. H. Hartman	Present	Present
Cuyahoga	G. E. Follansbee	Present	Present
Cuyahoga	S. L. Bernstein	Present	Present
Cuyahoga	S. S. Berger	Present	Present
Cuyahoga	H. H. Drysdale	Present	Present
Cuyahoga	H. E. Paryzek	Present	Present
Cuyahoga	M. A. Blankenhorn	Present	Present
Cuyahoga	P. A. Jacobs	Present	Present
Darke	S. A. Hawes	Present	Present
Erie	Charles Graefe	Present	Present
Fairfield	H. M. Hazelton	Present	Present
Fayette	E. F. Todhunter	Present	Present
Franklin	J. B. Alcorn	Present	Present
Franklin	J. H. J. Upham	Present	Present
Franklin	C. W. McGavran	Present	Present
Franklin	John M. Thomas	Present	Present
Fulton	R. W. Reynolds	Present	Present
Greene	R. H. Grube	Present	Present
Guernsey	F. M. Mitchell	Present	Present
Hamilton	C. L. Bonifield	Present	Present
Hamilton	E. O. Smith	Present	Present
Hamilton	Louis Schwab	Present	Present
Hamilton	M. A. Tate	Present	Present
Hamilton	W. H. Peters	Present	Present
Hancock	J. C. Tritch	Present	Present
Henry	O. L. Norris	Present	Present
Highland	L. Nelson	Present	Present
Hocking	M. H. Cherrington	Present	Present
Holmes	D. S. Olmstead	Present	Present
Jackson	W. J. Ogier	Present	Present
Lake	E. S. Jones	Present	Present
Licking	W. E. Boyer	Present	Present
Lorain	S. V. Burley	Present	Present
Logan	W. C. Pay	Present	Present
Lucas	R. L. Bidwell	Present	Present
Lucas	B. Gillette	Present	Present
Lucas	C. W. Waggoner	Present	Present
Madison	W. E. Smeltzer	Present	Present
Mahoning	W. E. Ranz	Present	Present
Mahoning	S. M. Hartzell	Present	Present
Marion	Dana O. Weeks	Present	Present
Medina	E. L. Crum	Present	Present
Mercer	F. E. Ayers	Present	Present
Miami	Gainor Jennings	Present	Present
Monroe	J. R. Parry	Present	Present
Montgomery	E. M. Huston	Present	Present
Montgomery	C. C. McLean	Present	Present
Morgan	Louis Mark	Present	Present
Morrow	R. L. Pierce	Present	Present
Muskingum	D. J. Matthews	Present	Present
Noble	J. L. Gray	Present	Present
Ottawa	A. A. Brindley	Present	Present
Paulding	C. E. Huston	Present	Present
Pickaway	Howard Jones	Present	Present
Pike	E. W. Tidd	Present	Present
Preble	S. P. Carter	Present	Present
Ross	R. E. Bower	Present	Present
Sandusky	C. I. Kuntz	Present	Present
Scioto	S. S. Halderman	Present	Present
Seneca	E. H. Porter	Present	Present
Seneca	J. D. Howe	Present	Present
Shelby	M. F. Hussey	Present	Present
Stark	B. C. Barnard	Present	Present
Stark	C. A. LaMont	Present	Present
Summit	D. H. Morgan	Present	Present
Summit	L. E. Brown	Present	Present
Summit	H. S. Davidson	Present	Present
Trumbull	R. R. Rogers	Present	Present
Tuscarawas	A. C. Dempster	Present	Present
Union	C. D. Mills	Present	Present
Washington	S. A. Cunningham	Present	Present
Williams	J. A. Weitz	Present	Present
Wood	H. J. Powell	Present	Present
Wyandot	G. O. Maskey	Present	Present
OFFICERS			
President	Charles Lukens	Present	Present
President-elect	Wells Teachnor	Present	Present
Treasurer	H. M. Platter	Present	Present

COUNCILORS

First District	Robert Carothers	Present	Present
Third District	R. R. Hendershott	Present	Present
Fourth District	John Keller	Present	Present
Sixth District	E. J. March	Present	Present
Seventh District	J. S. McClellan	Present	Present
Eighth District	A. B. Headley	Present	Present
Ninth District	J. S. Rardin	Present	Present
Tenth District	S. J. Goodman	Present	Present

Meetings of Council, May 2, and May 4, 1921

Council of the Ohio State Medical Association met in Columbus, Monday, May 2, 1921, with the following officers and members present: President Lukens, President-elect Teachnor, ex-President Baldwin, H. M. Platter, treasurer; Councilors Carothers, Hendershott, March, McClellan, Rardin, and Goodman; Dr. J. H. J. Upham, chairman of the Committee on Public Policy and Legislation, and Executive Secretary Martin.

Minutes of the meeting of March 6, 1921, as published on page 278 of the April issue of *The Journal*, were approved.

Dr. Goodman, chairman of the Committee on Arrangements for the annual meeting, submitted report of completed plans for the meeting, including scientific and general sessions, and entertainment. On motion, seconded, Dr. Goodman's report was accepted.

There being no further business to come before Council, a motion to adjourn, to meet with the House of Delegates at 11 A. M., Tuesday May 3rd, was adopted.

Council of the Ohio State Medical Association met in Post Room No. 1, Memorial Hall, Columbus, Wednesday, May 4, 1921, at 4 P. M. The following officers and councilors were present: President Teachnor, President-elect Carothers, ex-President Lukens, H. M. Platter, treasurer; Councilors Haines, Hussey, Hendershott, Waggoner, March, McClellan, Brush, Rardin, and Goodman.

On motion duly seconded, Dr. Goodman was elected as secretary of Council for the ensuing year.

President Teachnor announced the following appointments for members of the special and standing committees:

Medical Education: Drs. E. F. McCampbell, Medical College, Ohio State University, Columbus, chairman; Martin Fischer, University of Cincinnati College of Medicine; Harold N. Cole, Western Reserve University School of Medicine, Cleveland.

General Secretaries Committee: Drs. C. I. Kuntz, Fremont; A. F. Sarver, Greenville; Nelia B. Kennedy, Findlay; Robert Carothers, Columbus.

Committee on Control of Cancer: Drs. Andre Crotti, Columbus, chairman; C. W. Moots, Toledo; Frank E. Bunts, Cleveland; Louis Rawshoff, Cincinnati.

Committee on Hospital Standardization: Drs. C. D. Selby, Toledo, chairman; S. S. Halderman, Portsmouth; John C. Tritch, Findlay.

Committee on Crippled Children: Drs. B. G. Chollett, Toledo, chairman; A. H. Freiberg, Cincinnati; A. M. Steinfeld, Columbus.

Committee on Auditing and Appropriation: Drs. S. J. Goodman, Columbus, chairman; J. S. McClellan, Bellaire; J. S. Rardin, Portsmouth.

On motion, seconded, Council approved the committee appointments as announced by the president.

On motion, duly seconded, Council adjourned to meet in Columbus, Sunday, July 10, at 1:00 P. M., Eastern time.

S. J. Goodman, M. D., Secretary of Council.

Columbus State Meeting Topped Previous Records for Attendance and State and National Representation

The following list contains the names of 1,303 members of the Association and medical guests who registered as in attendance at the seventy-fifth annual meeting. In addition, there were at least one hundred visiting ladies who were not registered separately and as many commercial exhibitors who were registered but whose names are not published, bringing the total figure above 1,500. A limited number of medical students are included under medical guests. Every county society in the state, with the single exception of Geauga, is represented, and in most instances a good proportion of the membership is included. It was anticipated that Dr. Frank Pomeroy of Chardon would represent Geauga County, but he was prevented by illness at the last minute from coming.

ADAMS

Members—S. J. Ellison, O. B. Kirkpatrick, W. B. Loney, O. T. Sproull.

ALLEN

Members—W. W. Bearchamp, G. R. Clayton. Emma Ernsberger, A. H. Herr, A. D. Knisely, Iva M. Lickly, W. T. McGriff, G. E. Miller, W. A. Noble, William Roush, Charles Smith, I. C. Stayner, O. S. Steiner, P. J. Steuber, J. J. Sutter, T. R. Thomas, J. R. Tillotson, W. H. Vorbau, M. A. Wagner.

ASHLAND

Members—G. B. Fuller, George Riebel. *Guest*—P. R. Ensign.

ASHTABULA

Members—C. E. Case, C. L. Fox, G. T. Wasson.

ATHENS

Members—D. H. Biddle, C. W. Cable, T. A. Copeland, J. J. Hoodlett, C. S. McDougall, C. M. McLaughlin, J. T. Merwin, W. D. Porterfield, A. L. Pritchard, W. S. Rhodes, W. V. Sprague, E. I. Stanley, J. F. Weber.

AUGLAIZE

Members—J. E. Heap, E. F. Heffner, R. C. Hunter, C. P. McKee, G. E. Noble, H. S. Noble, N. V. Noble.

BELMONT

Members—H. J. Arnold, S. I. Bross, F. R. Dew, C. W. Kirkland, J. S. McClellan, D. M. Murphy, E. D. Piper, E. W. Turner, R. H. Wilson, F. S. Wright.

BROWN

Members—A. W. Francis, J. W. Kautz.

BUTLER

Members—C. T. Atkinson, Malcolm Bronson, H. L. Burdsall, C. J. Chamberlin, R. H. Cook, F. M. Fitton, W. E. Griffith, C. R. Keller, G. D. Lummis, Mark Millikin, C. A. Spittler, D. M. Skinner, P. M. Sater, K. R. Teachnor.

CHAMPAIGN

Members—C. F. Finsterwahl, R. T. Henderson, D. C. Houser, D. H. Moore, J. F. Stultz.

CLARK

Members—J. M. Austin, F. P. Anzinger, E. R. Brubaker, J. E. Burgman, P. E. Cromer, A. W. Detrick, C. W. Evans, J. C. Easton, T. G. Farr, D. K. Gotwald, W. A. Hadley, D. W. Hogue, C. B. Hamma, F. A. Hartley, S. R. Hitchings, C. L. Jones, R. H. Jones, J. A. Link, T. W. Mahoney, H. B. Martin, C. L. Minor, J. J. Moore, Arthur Pancake, W. B. Patton, R. R. Richison, J. H. Rinehart, Will Ultes. *Guest*—G. V. Sheridan.

CLERMONT

Members—O. C. Davison, F. A. Ireton, A. D. Spence.

CLINTON

Members—E. Briggs, Robert Conard, J. I. Davis, G. K. Dennis, J. F. Fisher, Kelley Hale, V. W. Hutchens, C. E. Kinzel, Elizabeth Shrieves, C. A. Tribbel, G. W. Wire, W. B. Yoakley.

COLUMBIANA

Members—J. S. Atchison, A. R. Cobb, W. N. Gilmore, P. C. Hartford, Stanton Heck, C. R. Larkin, J. W. McCulloch, R. E. Smucker, E. M. Wilson, H. K. Yaggi. *Guest*—G. E. Byers.

COSHOCKTON

Members—B. O. Burkey, E. C. Carr, J. D. Lower, J. G. Smailes, E. M. Wright.

CRAWFORD

Members—W. G. Carlisle, H. H. Hartman, M. L. Helfrich, Lucia Kemp-Feighner, C. H. King, C. A. Lingenfelter, J. J. Martin, C. D. Morgan, C. A. Ulmer, W. L. Yeomans.

CUYAHOGA

Members—R. P. Albaugh, J. Anderson, L. K. Baker, W. R. Barney, H. D. Bishop, S. S. Berger, S. L. Bernstein, M. E. Blahd, M. A. Blankenhorn, C. W. Burhans, C. D. Christie, J. E. Cogan, F. P. Corrigan, G. W. Crile, C. L. Cummer, H. H. Drysdale, F. C. Herrick, G. E. Follansbee, S. T. Forsythe, W. D. Fullerton, E. W. Garrett, E. H. Harsh, H. J. Hartzell, C. H. Hay, J. M. Ingersoll, P. A. Jacobs, H. J. John, H. T. Karsner, F. T. Kopfstein, A. J. Lanza, W. I. LeFevre, F. G. Leonard, N. P. McGay, Myron Metzenbaum, S. H. Monson, Paul G. Moore, James Munsie, C. F. Nelson, H. V. Paryzek, A. F. Pav, John Phillips, V. C. Rowland, W. D. Sharp, O. M. Shirey, S. W. Smolik, W. G. Stern, C. W. Stone, A. L. Stotter, W. S. Taylor, J. E. Tuckerman, W. C. Tuckerman, W. H. Tuckerman, J. M. Waugh, K. S. West, I. I. Yoder, O. F. Simonds, J. J. Kurlander. *Guests*—Harry Lutz, G. J. Mateja, Guy M. Wells.

DARKE

Members—J. B. Ballinger, P. W. Byers, M. M.

Corwin, E. A. Fisher, W. T. Fitzgerald, S. A. Hawes, M. C. Hunter, E. G. Husted, E. S. Jones, F. M. Kissell, E. E. Myers, J. E. Monger, J. C. Poling, D. Robeson, C. F. Ryan, A. F. Sarver, H. A. Snorf, C. I. Stephens, O. P. Wolverton.

DELAWARE

Members—O. W. Bonner, W. E. Borden, A. H. Buck, C. W. Chidester, G. E. Cowles, M. W. Davis, C. A. Day, N. Gorsuch, J. H. Gerhardt, A. J. Pounds, Ella Welch.

ERIE

Members—H. B. Frederick, Smith Gorsuch, Charles Graefe.

FAIRFIELD

Members—F. P. Atkinson, G. O. Beery, G. W. Beery, H. F. Bigony, P. S. Bone, J. T. Farley, H. M. Hazelton, B. G. Illes, A. V. Lerch, C. J. Roach, E. B. Roller, R. H. Smith, A. K. Smith, W. B. Taylor, J. F. Wilson.

FAYETTE

Members—L. L. Brook, Lucy W. Pine, D. H. Rowe, A. S. Stemler, Howard Stitt, E. F. Todhunter.

FRANKLIN

Members—R. O. Adams, D. R. Alban, N. A. Albanese, J. B. Alcorn, J. G. Alcorn, K. H. Armen, H. A. Baldwin, J. F. Baldwin, R. L. Barnes, W. F. Bay, E. C. Beam, J. A. Beer, J. E. Beery, C. H. Benson, L. L. Bigelow, F. B. Blakey, M. W. Bland, G. H. Bonnell, H. E. Boucher, C. F. Bowen, J. M. Bowman, Wayne Brehm, C. I. Brett, J. E. Briggs, J. W. Brobst, E. C. Brock, J. E. Brown, R. A. Brown, E. C. Buck, A. K. Buell, D. V. Burkett, C. J. Burns, E. E. Carleton, J. S. Carlton, E. H. Chapin, C. F. Clark, F. S. Clark, I. G. Clark, K. A. Clouse, J. J. Coons, Albert Cooper, G. W. Cooperrider, E. F. Cox, Mary D. Crane, C. H. Creed, Andre Crotti, A. B. Davenport, W. C. Davis, C. D. Dennis, W. D. Deuschle, W. L. Dick, M. T. Dixon, V. A. Dodd, John Donley, H. H. Dorr, R. B. Drury, Walter E. Duffee, J. D. Dunham, J. M. Dunham, J. M. Dunn, J. B. C. Eckstrom, S. D. Edelman, W. E. Edmiston, E. J. Emerick, U. K. Essington, E. W. Euans, T. A. Evans, H. D. Farrar, J. P. Farson, H. H. Fisher, Fred Fletcher, T. R. Fletcher, Jonathan Forman, E. M. Freese, C. F. Frosh, J. M. Gallen, F. W. Gardner, E. E. Gaver, S. D. Giffin, D. B. Gilliam, S. J. Goodman, E. J. Gordon, J. L. Gordon, P. A. Gordon, W. J. Gorey, Emilie C. Gorrell, W. J. Green, H. L. Griffith, F. E. Hall, C. S. Hamilton, E. A. Hamilton, J. H. Hanes, F. C. Haney, G. T. Harding, Jr., E. A. Harper, H. L. Harris, I. B. Harris, R. R. Harris, C. L. Harrod, S. A. Hatfield, E. M. Hatton, A. M. Hauer, E. R. Hayhurst, S. B. Hays, F. A. Heckler, W. C. Heintz, A. G. Helmick, Samuel Hindman, W. H. Hodges, C. H. Hoffhines, G. W. Hogland, Howard Holmes, J. E. Holmes, Ross Hopkins, E. G. Horton, L. P. Howell, C. D. Hoy, W. D. Hoyer, Austin Hutt, W. D. Inglis, Alice M. Johnston, J. S. Jones, M. E. Jones, R. R. Kahle,

Louis Kahn, G. W. Keil, F. L. Keiser, J. E. Kerschner, J. D. Kessler, R. A. Kidd, B. R. Kirkendall, R. W. Kissane, O. E. Kline, O. M. Kramer, E. T. Kuhn, A. B. Landrum, L. F. Lauf, F. F. Lawrence, J. W. Leist, W. E. Lloyd, C. R. Longworth, E. C. Ludwig, Z. V. Luke, J. J. Magruder, E. F. McCampbell, J. J. McCloud, E. W. McClure, J. A. McClure, A. B. McConagha, J. R. McDowell, C. W. McGavran, L. McKittrick, Clayton McPeck, J. T. McVey, C. S. Means, H. J. Means, J. W. Means, W. J. Means, A. C. Miller, G. W. Miller, W. H. Miller, W. F. Millhon, H. A. Minthorn, I. J. Mizer, C. M. Mooney, D. L. Moore, F. R. Morath, G. W. Mosby, L. M. Murphy, W. D. Murphy, H. E. Myers, L. W. Neiswender, G. B. Nessley, J. H. Nichols, R. W. Nosker, W. E. Obetz, N. P. Oglesby, C. T. Okey, A. B. Olsen, E. S. Oman, M. F. Osborn, J. E. Overly, W. T. Palchanis, E. M. Parrett, A. A. Peasley, E. F. Peinert, J. McI. Phillips, Woodrow Pickering, H. M. Platter, C. D. Postle, Joseph Price, W. H. Pritchard, C. O. Probst, A. W. Prout, Harry Prushing, R. A. Ramsey, F. S. Rarey, J. M. Rector, P. J. Reel, Edward Reinert, J. F. Reynolds, R. A. Rice, J. A. Riebel, Rush Robinson, Andrews Rogers, G. W. Rogers, C. C. Ross, E. H. Ryan, D. G. Sanor, G. C. Schaeffer, E. W. Schueller, R. M. Schwartz, Ernest Scott, A. H. Sealy, O. H. Sellenings, C. E. Sharp, G. H. Shawaker, J. W. Sheetz, C. J. Shepard, C. M. Shepard, I. W. Sherwood, E. R. Schilling, P. D. Shriner, C. E. Silbernagel, E. R. Schaffer, G. D. Sheets, A. J. Shoemaker, E. E. Smith, W. P. Smith, H. H. Snively, C. L. Spohr, A. L. Stage, F. M. Stanton, E. B. Starr, A. M. Steinfeld, F. L. Stillman, J. A. Stout, G. A. Sulzer, M. E. Swinehart, Robert Tarbell, R. B. Taylor, S. B. Taylor, Wells Teachnor, Wells Teachnor, Jr., Andrew Timberman, A. W. Tittsworth, J. M. Thomas, J. A. Turner, J. H. J. Upham, C. M. Valentine, W. S. Van Fossen, J. H. Vorhes, F. C. Wagenhals, G. O. Walsh, Yeatman Wardlow, Frank Warner, J. H. Warren, G. M. Waters, W. J. Weaver, C. C. Webb, H. V. Weihrauch, M. Grace Welch, J. O. Welch, C. H. Wells, H. O. Whitaker, H. W. Whitaker, Howard Whitehead, W. F. Whitten, J. W. Wilce, S. S. Wilcox, F. O. Williams, G. L. Williams, T. R. Williams, J. C. Williamson, E. J. Wilson, Ida M. Wilson, Frank Winders, R. B. Wittich, A. C. Wolfe, E. C. Wood, M. J. Woodlin, Ada V. Wright, F. C. Wright, J. W. Wright, C. H. Wyker, L. V. Zartman.

Guests—Clarence Adams, W. M. Athey, W. L. Beach, W. H. Blake, J. W. Boger, F. G. Boudreau, W. H. Buker, A. R. Burkhart, F. R. Castleman, P. H. Charlton, E. F. Clouse, W. S. Cole, C. W. Conley, R. F. Corwin, J. H. Cowan, W. F. Drake, C. G. Egger, J. W. Ferguson, G. E. Flinn, Emerson Gillespie, M. Goldberg, W. H. Hamilton, G. W. Helmick, Blanche Hopkins, W. B. Hutchin, Starling Hutt, C. A. Hyer, J. C. Johnson, W. P. Kyle, R. G. Leland, R. G. Lewis, Don K. Martin, Robert Poling, K. H. Reichelderfer, E. V. Reu-

tinger, W. A. Ricketts, H. M. Scott, G. J. Searle, Jr., C. F. Shank, C. S. Smith, J. D. Spaid, G. Vernon Smith, C. R. Snider, H. J. Southmayd, G. D. Vogelsang, Ann P. Warfield, W. A. Whitman, G. D. Williams, Mary A. Wilson, Giles Wolverton.

FULTON

Members—T. B. Blair, E. A. Murbach, R. W. Reynolds.

GALLIA

Members—T. J. Allison, Mary L. Austin, J. T. Hanson, W. E. Howell, G. G. Kineon, G. A. Mock, J. G. Schwarz.

GREENE

Members—C. H. Denser, P. D. Espey, R. K. Finley, W. H. Finley, W. A. Galloway, J. H. French, R. H. Grube, J. C. Lackey, Reed Madden, C. G. McPherson, A. C. Messenger, H. C. Messenger, A. N. Vandeman.

GUERNSEY

Members—D. L. Cowden, A. B. Headley, C. C. Headley, F. C. Huth, F. W. Lane, M. S. Lawrence, F. M. Mitchell, H. R. Neeland, A. G. Ringer, G. F. Swan.

Guests—J. W. Calhoun, J. E. Patton.

HAMILTON

Members—D. H. Abbott, C. C. Agin, E. M. Baehr, C. L. Bonifield, F. J. Boyd, W. L. Brodberger, C. J. Broeman, F. M. Burns, J. A. Caldwell, R. G. Carothers, Robert Carothers, J. T. Clear, D. J. Davies, V. W. Fishbach, Alfred Friedlander, O. P. Geier, W. D. Haines, R. B. Hall, R. C. Heflebower, G. A. Hinnen, Robert Ingram, W. S. Keller, Edwin Khuon, Clarence King, A. L. Knight, S. P. Kramer, F. H. Lamb, C. A. Langdale, D. J. Lyle, H. D. McIntyre, G. F. McKim, F. H. McMechan, J. D. Miller, E. W. Mitchell, William Mithoefer, J. W. Murphy, C. A. Neal, W. H. Peters, J. E. Pirrung, A. Ravogli, C. B. Rogers, Robert Sattler, H. M. Schneider, Louis Schwab, O. J. Seibert, C. E. Shinkle, F. X. Siegel, G. O. Sikes, E. O. Smith, C. T. Souther, J. G. Stammel, Henry Stanbery, Erwin Strachley, M. A. Tate, R. B. Tate, W. A. Teveluwe, D. H. Thompson, D. T. Vail, Dudley Webb, J. H. Wilms, William Wolfram.

Guests—George Bigler, J. L. Steele, Henry Ladd Stickney, C. J. Visconta.

HANCOCK

Members—J. P. Baker, D. B. Biggs, J. M. Firmin, W. J. Fishell, J. V. Hartman, Nelia B. Kennedy, N. L. MacLachlan, W. M. Metzler, T. A. Spitler, J. C. Tritch, W. J. Zopfi.

HARDIN

Members—C. R. Blosser, D. H. Bowman, J. S. Hedrick, A. S. McKittrick, C. C. McLaughlin, E. S. Protzman, R. G. Schutte, O. H. Tudor, H. R. Wynn.

HARRISON

Members—H. G. Bonnell, W. A. Zellars.

HENRY

Members—J. R. Bolles, R. L. Davis, A. E. H. Maerker, O. L. Norris, Thomas Quinn, C. H. Skeen.

HIGHLAND

Members—J. C. Bohl, H. W. Chaney, O. R. Eylar, J. H. Frame, R. E. Holmes, R. J. Jones, W. C. Martindill, L. Nelson.

Guest—A. H. Seeds.

HOCKING

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OHIO HOSPITAL NOTES

—The Ohio Hospital Association, the Ohio Nurses' Association and the Ohio League of Nursing Education held a joint meeting in Cleveland, May 16-20. The idea of the joint meeting was to combat the growing tendency of some of these groups to divorce themselves from one another. The first two days were confined to the Ohio Hospital Association, the third to a joint meeting with the two nursing groups, and the last two days entirely to nursing matters.

—The Ohio Match Company has announced intention of donating to the village of Wadsworth a new, modern building for use as a municipal hospital. The structure, originally planned for hotel purposes for match employes, is of brick, concrete and steel construction, costing more than \$100,000. It is said to be ideally arranged for its new use and with the addition of an elevator will be a complete hospital. Some of the necessary furniture is also part of the gift. The village is charged with the maintenance and operation costs of the hospital which will probably be met by popular subscription during the first year and thereafter by a tax levy.

—Fifty milligrams of radium, valued at \$6,000, were lost at St. Vincent's Hospital, Toledo, recently through the accidental dropping of the precious substance in a catch basin in an operating room. Efforts of a chemist sent by the Radium Chemical Company of Pittsburgh to locate the radium with an electroscope were unsuccessful. The loss was covered by insurance.

—Mr. Byron W. Stewart has assumed the superintendency of Youngstown Hospital. In the past three years he has been connected with the Allegheny General Hospital, Pittsburgh, as assistant superintendent.

—The new Cleveland City Hospital will make its own ice at a saving of \$900.00 a year, according to members of the board of control who recently authorized the installation of an ice plant at a cost of \$40,425.

—Members of the staff of Canton clinic declare that the shortage of hospital space in Canton, particularly for the care of persons without means, has become so serious that lives are in danger of being sacrificed. They have appealed to the mayor and various civic bodies to unite in an effort to take over the clinic and make it the nucleus of a city hospital, which they assert is the solution to the problem. The clinic is at present maintained by private funds.

—Mr. H. A. Phillips, for ten years associated with the Ohio State Sanatorium, Mt. Vernon, as chief clerk and acting superintendent, has become superintendent of Rocky Glen Sanatorium, McConnelsville. This new arrangement will re-

lieve Dr. Louis Marks, the owner of the institution of business detail, and permit him to devote his full time to medical direction. Dr. Peter Ver Muelen, formerly a member of the Rocky Glen staff, has assumed his duties as head of the new tuberculosis department at the Dayton Soldiers' Home.

—Following the recommendations of a committee appointed sometime ago to investigate the needs of the Findlay Home and Hospital, to the effect that a new service wing, an elevator and X-ray equipment are required, the city council authorized the submission of a \$75,000 bond issue to the voters for these improvements. If the bond issue carries the new addition, two stories in height and completely modern and fireproof, will be erected within a year.

Portsmouth to Have Model Clinic

Coincident with the opening of the new Mercy Hospital in Portsmouth early this month a thoroughly modern clinic, patterned after the famous Mayo clinic and said to be the largest institution of its kind between Cleveland and Rochester, will be established in Portsmouth. The new clinic will have a staff composed of fourteen physicians, who are also members of the hospital staff, and a director whose name has not yet been announced but who will come from the Rochester clinic.

While the clinic will not be located in the hospital building, it will serve as a feeder for it as all patients will undergo diagnosis at the clinic before entering the hospital.

Dr. Arthur Moore will be chief of staff and head of the obstetrical department. Dr. Gilbert Micklethwaite will head the department of clinical medicine and his associate will be Dr. W. D. Micklethwaite. Dr. Thomas G. McCormick will be assistant chief of staff and director of the surgical department, with Drs. J. N. Ellison and O. R. Micklethwaite as his associates. They will be assisted by Drs. Harry Rapp and H. M. Keil. Other staff members and the departments in their charge will be: Dr. Tunis Nunemaker, pediatrics; Dr. C. W. Wendelken, genito-urinary; Dr. George Brown, eye, ear, nose and throat; Dr. Oral Tatje, X-ray; Dr. S. D. Ruggles, secretary of staff and head of the departments of oral surgery and focal infections.

The Portsmouth physicians will be assisted by a number of physicians in the county including Drs. W. G. Cheney, New Boston; J. W. Hutchins, Sciotoville; D. N. Hopkins, Friendship; J. N. Hilling, Lucasville; G. W. Chabot, Peebles; G. M. Andre, Wheelersburg, and G. W. Fishbaugh, Harrisonville.

The clinic will maintain out-patient maternity and pediatric branches. One of the most valuable features of the clinic will be a completely equipped laboratory; another will be the research department under the personal direction of the clinical director.

Ohio's Medical Practice Laws Held Constitutional by Supreme Court; State Medical Board Vindicated and Chiropractic Injunction Dissolved

In an opinion rendered April 26, 1921, by the Supreme Court of Ohio, the Medical Practice Act of this state was again upheld and a stinging rebuke administered to those who seek to tear down the safeguards erected through such legislation as the Platt-Ellis law and Talley law which prescribe the qualifications for all who would treat the sick. The Court, in an able opinion written by His Honor, Justice Wanamaker, and concurred in by every member of that tribunal, recognizes public health as one of the most vital subjects of the police power of the state and in the conservation of public health upholds the right of the legislature to require all those who may desire to practice the art of healing, to furnish some substantial evidence, by public examination or otherwise, of qualifications to practice such art, as a whole or in any of its branches.

The statutory qualifications defined by Section 1270, General Code, as preliminary to taking an examination of persons desiring to secure a license to practice the art of healing in Ohio are held to be reasonable and valid statutory provisions, and are declared to be in full force and effect in the limited practice act, until lowered by any rule or regulation of the Ohio State Medical Board, pursuant to the statute.

This was an action in injunction brought by D. A. Williams for himself and about 300 chiropractors in the state who had refused to qualify under the law as limited practitioners, and raised the question as to the constitutionality of the Medical Practice Act, also charging discrimination against them by the State Medical Board. The action was begun before Judge Powell of the Cuyahoga County Common Pleas Court, who granted the injunction prayed for by the practitioners. Appeal was taken to the Court of Appeals where the injunction was dissolved and the petition dismissed at the cost of the plaintiffs. The judgment of the Court of Appeals is affirmed by unanimous decision of the Supreme Court.

The opinion of the Court states that "unusual research and consideration to the questions involved" have been given.

Here is what the Court says on the subject of public health:

"Public health is the very heart of public happiness. The constitutional guarantees of life, liberty, and the pursuit of happiness are of little avail, unless there be clearly implied therefrom the further guarantee of safeguarding the public health, in order that life, liberty and the pursuit of happiness shall be made practical and plenary.

"Of late years the doctrine of conservation has

received a new impetus in our American system of government. Originally this doctrine was applied largely to mines, forests, water-power and our natural resources. Later it was extended to hogs, cattle, buffalo and wild animals generally, and strange to say, lastly it was applied to human beings. Sanely and sensibly, it was argued that life was worth while in the abstract. It must be made effective by the conservation of health to which that life is entitled.

"Man is still the greatest mystery to man. His mind and body is the greatest workshop of the world. The chemical and organized forces operating in life and in death, in every possible variety of action and reaction, make him the most interesting study of natural science.

"Over this wonderful laboratory, Doctor Nature presides. His remarkable management of the human organism, in preserving its orderly functions, is excelled in no other department of nature. If uninterfered with or unhandicapped by any artificial circumstances or agency, he has within his laboratory the necessary cure for the major parts of all the ills that human flesh is heir to.

"As the Great Physician, he has charge of this great laboratory, that furnishes not only the motor power for all human activity but likewise the curative agents for the abnormal conditions that frequently arise from the abuses, excesses and exposures of human life.

"The most that any human physician can do by way of cure of human ailments, is to aid or facilitate Doctor Nature's general plan. Manifestly in order to do this, there must be a thorough knowledge of Doctor Nature's plan and policies in the various departments of human life,—the alimentary, the circulatory, the respiratory, the nervous and all other departments that coordinate and cooperate in human life.

"In order to intelligently and effectively cooperate, the human physician must have equal knowledge with Doctor Nature, as to this human laboratory, its chemical and organic ailments, agents, and forces, else they will work to cross purposes with each other.

"This would seem too obvious to require further argument. In primitive life, every man was his own dentist, doctor, lawyer. Why? Because there were no specialists, and one man was about as smart as another. In the course of our civilization and education, we came to realize that in many departments of life, special knowledge and training were highly necessary, and that the time had gone when *any* person had the right to assume that he could skillfully exercise the healing art, advertise as such, and induce the

public to believe he was so qualified, without the slightest evidence of such qualification.

"Accordingly, the states now nearly all of them, have adopted a wise and salutary policy, that before persons shall engage in certain occupations that require special expert knowledge, training and experience, and as to which the general public has little or no knowledge—they must qualify before some board especially fitted to test them through some preliminary and appropriate examination, to ascertain their personal fitness to practice such special business or profession, *in order to insure the public of their efficiency before securing the public's confidence and the public's cash.*

"It would seem obvious, that in the exercise of the art of healing of the human body, it would be of primary importance to thoroughly know and understand the human body, its anatomy, physiology, hygiene and chemistry, through acquaintance with the structure of all the different organs of the body in their normal state so as to be able to determine the nature and extent of their abnormality, which is always the basis of disease.

"It is surely only elementary to say that before one can treat a disease intelligently and efficiently, he must know much about the nature and extent of that disease, the organs and parts affected, and even the cause of that disease. All these things and many more enter into an intelligent, practical and effective treatment.

"Every business and science has a language all its own. One of the first terms confronting us in the art of healing, is the scientific term of pathology, which relates to the nature, cause, progress and symptoms of a disease. Surely no argument is needed to convince one that such knowledge is highly essential to the proper diagnosis, that is the determination of the particular disease or ailment from which the patient is suffering. After determining such disease, then comes the application of the appropriate remedy."

"If there be that thorough, scientific and practical knowledge of pathology, and that skilled scientific knowledge of diagnosis, then the state may safely leave the choice of remedy or cure very largely to the judgment of the practitioner. At least, his expert knowledge, derived from experience and education, should best fit him to make that choice, and a wise application of the remedy.

"But obviously, as to these two major essentials of professional equipment,—the state should set its standards high, so as to abundantly protect the public from the mistakes of ignorance, however well intentioned, from charlatanism, from professional quackery, however garbed in alluring advertisements, and from all those who would prostitute their profession to a profiteering basis.

"Manifestly before this scientific knowledge of the human body can be properly acquired, there

must be some preliminary educational qualifications of a general nature. * * *

"It is absurd for anyone to say, that you can develop and train a mere hod-carrier, with comparatively no education to become a skilled physician or surgeon in the same time that you can a college man with the same natural endowments.

"The medical practice act of Ohio recognizes the necessity of these preliminary qualifications, and before entering upon the study of the art of healing, the General Assembly has wisely provided by Section 1270 of the Medical Practice Act, the following:

"The following preliminary educational credentials shall be sufficient,—A diploma from a reputable college granting the degree of A.B., B.S., or equivalent degree; a diploma from a legally constituted normal school, high school, seminary, issued after four years of study; a teacher's permanent or life certificate; a student's certificate of examination for admission to the freshman class of a reputable literary or scientific college."

"The State Medical Board has recognized and adopted in effect these reasonable requirements in general educational lines, before anyone may take the examination for the general practice of the art of healing.

"These are not made imperative but their equivalent must be possessed by the applicant. In addition thereto the applicant must also produce a certificate issued by the entrance examiners and a diploma of a legally chartered medical institute in the United States *in good standing*, as defined by the board at the time the diploma was issued, or a diploma or license approved by the board, which confer the full right to practice all branches of medicine or surgery in a foreign country."

" * * Surely there is nothing arbitrary, discriminating, irrelevant or unreasonable as to these qualifications from the viewpoint of personal and professional fitness for efficient public service in the conservation of public health. Neither are there well-founded objections to be taken to any of the other sections of the act as a whole, so far at least as relevant to this case."*

Counsel for the chiropractors cited a recent decision said to have been rendered in Tennessee in which the Court held that since chiropractic treatments were not shown to be injurious to anybody, "that they do not give medicine, operate or subject the body to injurious manipulations—the requirement that they study and be examined in subjects in no way pertaining to their occupation is an arbitrary and unreasonable attempt to restrict their liberties and the liberty of the people who wish to patronize them."

The Ohio Court does not agree with this decision and Justice Wanamaker says so very plainly. "We have not been furnished the Tennessee statute to ascertain whether it bears any analogy to the Ohio statute," says the opinion,

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"but even if it did," the Court continues, "the obvious fundamental fallacies appearing in the opinion, as quoted, clearly show unreasonableness of the judgment in the Tennessee case."

* * *

"As the body politic is sometimes found to be in possession of undesirables foreign to our government and our public welfare that requires immediate and drastic deportations to other shores, so the physical body is not infrequently found to be in possession of some foreign growth whose immediate removal is indispensable to the health and life of the patient. To say that such knowledge in no way pertains to the treatment of the chiropractor is sheerest nonsense, even to a layman.

"Hot and cold applications are ordinarily most efficacious for temporary relief and very seldom harmful, but that is scarce a reason why they should be resorted to in all cases to furnish relief, merely because they are generally harmless. The failure to give the natural and necessary relief called for by the condition of the patient in the shape of some positive or affirmative action by way of treatment may be as harmful as the giving of a treatment that is harmful *per se*. What the patient often needs immediately is helpful treatment and not merely harmless treatment.

"The logic of the opinion (Tennessee case) does not appeal to our judgment.

"The saner and more sensible doctrine to the contrary is laid down in a very elaborate and exhaustive opinion of the Supreme Court of Missouri, in *State v. Smith*, 33 L.R.A. N.S., 179." The opinion of Judge Ferris in the Missouri cases is quoted from in the Ohio opinion and is referred to as "full of relevant citations, throwing much light on the principles herein involved." In this case the Court characterized the claim of the chiropractors that they do not "treat disease," but "adjust the cause" as "merely juggling with words."

As to the contention that it is a violation of their constitutional liberty to restrict the right to pursue any lawful calling or to determine for the people how they shall be treated, the Missouri court cites the laws prohibiting the manufacture of liquor which are enacted under the police powers and says: "Our jails and penitentiary are filled with inmates who have been deprived of their liberty for the public good. The power of the state to deprive its citizens of their lives for the public good has never been questioned."

Quoting further from the opinion of Judge Ferris in the Missouri case, the Supreme Court says: "The legislature thought perhaps that this act was necessary to protect credulous sick people from injury at the hands of charlatans and quacks, with their specious promises of a sure cure without drugs; or it may have thought necessary to forbid harmless practices in order to insure protection against those that are danger-

ous and hurtful. Sick people sometimes grow desperate in their search for a cure, or their judgment becomes weakened, so that they fall an easy prey to the ingenious and varied devices of the pretended healer. We know that some people are prone to give more weight to a skillfully worded advertisement than to the advice of a competent physician."

The Supreme Court upheld the findings of the Court of Appeals throughout in declaring there were no grounds for complaint against the State Medical Board by the chiropractors. The lower court found that the various chiropractic schools instead of being discriminated against by the Ohio Medical Board, had refused to permit the State Medical Board to examine their course of study "unless the board would put itself in an attitude of sympathy with the work of the chiropractic schools."

Commenting on this attitude on the part of the chiropractic schools, the Supreme Court says, in conclusion:

*"It is rather a novel claim to make, that before one can be fair and impartial as to the standing of a school or college, that he must first put himself in a mental attitude of sympathy with the school. Ordinarily, the Courts advise juries against all considerations of sympathy in the determination of a fair and impartial verdict. * * * If there be any need of a sympathetic attitude, it would seem that the schools should put themselves in an attitude of sympathy toward the Ohio statutes, rather than that the statutes and the administrative boards under them should be put in an attitude of sympathy toward the schools."*

* * *

The chiropractors have secured a writ or application for appeal to the United States Supreme Court which has not yet heard the application for review by that court. In the meantime there is another delay in the enforcement of the law. The hope is entertained, however, that the United States Supreme Court will refuse to review the decision of the Ohio Supreme Court.

Alumni Reunion

The annual reunion and clinic week of the Alumni Association of the Ohio-Miami Medical College, the Medical Department of the Cincinnati University, will be held in Cincinnati on June 16, 17 and 18. Dr. John F. Erdmann, New York, will deliver the address on Surgery and Dr. George Draper, New York, the address on Medicine, on the evening of the 17th.

The entertainment for the visiting alumni will include clinics, visits to the French Model Dairy, the Cincinnati water works, ball games, golf, etc. The annual banquet will be held on the evening of June 17th at which Dr. Robert Conard, of Blanchester, will preside as toastmaster.



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Hughes-Griswold Law in Litigation

A test of the constitutionality of the Hughes-Griswold health district law is promised in a mandamus suit filed in the Supreme Court by the village of Cuyahoga Heights against the auditor of Cuyahoga County. The village seeks to compel the auditor to pay over to it money which he withheld from its share of the tax collections to be credited to the health district fund.

Cuyahoga Heights is governed under a municipal charter, which provides for an elective health commissioner who "shall exercise the powers to be exercised and performed by boards of health and health officers in villages."

The petition filed in the Supreme Court recites that the village levied taxes for a health fund as well as for other purposes, and that collections for health purposes amounted in 1919 to \$432.10, while the auditor has retained \$1,246.36 from total collections, irrespective of the funds to which apportioned.

The village in its petition not only denies the constitutionality of the Hughes-Griswold Act, but also asserts that the district board of health at the time of adoption of the 1920 budget was not legally constituted and that the budget was not reviewed and approved by the district advisory council.

The petition further demands payment of \$479.17 withheld in the same manner from collections for the earlier half of 1920 and states that for this period the village health fund levy amounted to \$267.75. The alleged unconstitutionality of the Hughes-Griswold Act is the only ground for this section of the petition.

By the rules of the Supreme Court the defendant was required to file an answer by May 29.

Lima Clinic Well Attended

More than 200 physicians from points within a radius of fifty miles attended the second annual clinic held at St. Rita's Hospital, Lima, April 19. This was almost double the number which attended last year. The various departments of the hospital were open for inspection and throughout the day the surgical staff had operative work, while the medical staff had numerous interesting cases and heard many excellent papers. The complete scientific program follows:

Dr. E. D. Sinks, "Pelvic Infection"; Dr. H. S. Noble, "Diverticulum of Esophagus"; Dr. R. A. Buchanan, "Cholecystectomy"; Dr. T. R. Thomas, "Hysterectomy-Herniotomy"; Dr. G. R. Clayton, "Cataract Extraction"; Dr. T. R. Terwilliger, "Necrosis of Tibia," and "Chronic Endometritis"; Dr. Oliver S. Steiner, "Demonstrating Series of Cases of Industrial Surgery"; Dr. A. C. Adams, "Pyosalpinx"; Dr. A. F. Basinger, "Amputation of the Breast and Post-Operative

Hernia"; Dr. G. R. Clayton, "Four Tonsillectomies and Ether and Gas Anesthesia"; Dr. Alan Knisely, "Tonsillectomy and Local Anesthesia"; Dr. Virgil Parent, "History, Dressing and Prognosis of Mastoid"; Dr. Walter Noble, "Tonsillectomy"; Dr. M. A. Wagner, "Demonstrations of Five Cases Streptococcal Infection of Hand"; Dr. F. G. Stueber, "Demonstrating Trachoma"; Dr. A. C. Adams, "Demonstrating Dilation of Stomach"; Dr. C. D. Gamble, "Urethral Stricture Following Gangrene of Scrotum"; Dr. C. H. Clark, "Mental Diseases, With Care Demonstration"; Dr. J. W. Diamond, "Dental Infection"; Dr. P. I. Tussing, "Tuberculosis, with Care Demonstration"; Dr. J. R. Tillotson, "Demonstrating Osteomyelitis and Infantile Paralysis"; Dr. J. R. Johnson, "Treatment of Social Disease"; Dr. E. J. Curtiss, "Ether Anesthesia"; Dr. W. H. Parent, "Modern Management of Obstetrics"; Dr. H. S. Noble, "Endocrinology"; Howard F. Webb, B. S., showing "Two Gastro-Intestinal X-rays."

At noon the visiting physicians were guests at a luncheon and in the evening a banquet was held at the hospital. The members of the entertainment committee were Drs. W. L. Neville, V. R. Hay, M. A. Wagner, Virgil Parent and A. C. Adams. The program committee consisted of Drs. J. R. Tillotson, secretary of the Allen County Medical Society; C. L. Steer and A. D. Knisely.

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Further Sleeping Sickness Data

Some very interesting facts with reference to sleeping sickness have been brought out by the statistics just compiled by Dr. U. G. Murrell, chief of the Bureau of Vital Statistics, which show that for the month of February, 1921, a short month, there were 39 deaths from this malady, against the same number for January.

Another point of interest is noted in that there were only six deaths in the counties while there were 33 in the cities, while in January there were 11 deaths in the counties and 28 in the cities. The change of predominance from rural to city surroundings is unexplainable, Dr. Murrell states.

There was a total of 120 deaths from this cause reported in 1920, and a total of 78 for January and February, 1921, showing a very heavy increase for the first two months of this year. Forty-six were males and thirty-two females; 76 were white and two negroes; 47 were native Ohioans and 66 native of the United States, and 12 foreigners. The age ranges from one to sixty-three years, the predominating age period being from 34 to 39 years, in which there were 13 deaths.

Fifty-nine per cent. of these deaths were males, while only 53 per cent. of the grand total of all deaths for January and February, 1921, were males. There were 5623 deaths from all causes in February, a decrease of 547 over the month of

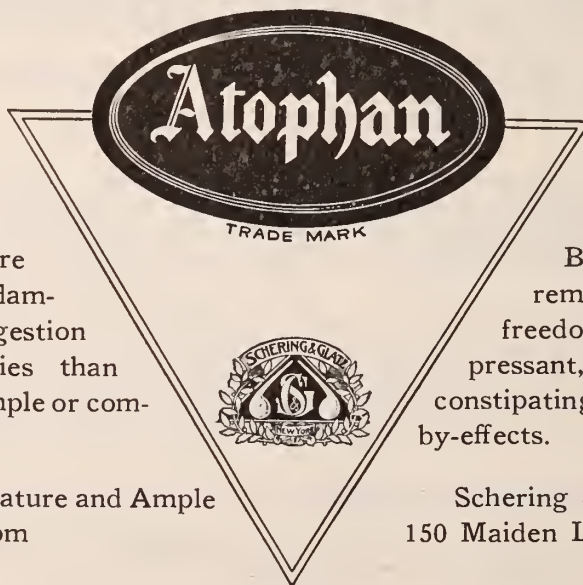
January. This does not mean a decrease in the death rate, however, as the month of February is a short month, and the average daily deaths in the state were 200.

It is also interesting to note that a large percentage of the certificates show no contributory cause. Of those given, influenza and pneumonia take the lead, with 11 deaths for January and February, 1921, while nephritis comes next with 3, and typhoid fever with 2.

Another point brought out by death certificates in these cases, is that sleeping sickness does not prevail so much among those of the lower walks of life, but rather to the middle and upper classes. Environments and surroundings seemingly have no effect on the pursuit of the malady.

IN HONOR OF MME. CURIE

The June issue of the *Medical Review of Reviews* will be a special radium number dedicated to Mme. Curie. The issue will consist exclusively of articles on radium and its uses, written by prominent radiologists on this country and Canada. Copies will be sent complimentary to physicians interested in the uses of radium and readers of this item desiring that issue may obtain it by writing to the Medical Review of Reviews, 51 East 59th Street, New York.



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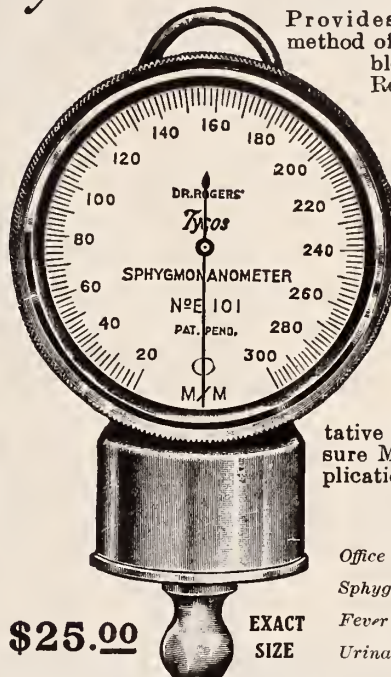
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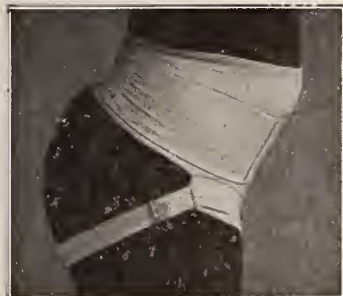
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(James A. Beer, Sec'y)

At the regular meeting on May 16 Dr. Joseph L. DeCourcy of Cincinnati read a paper on "The Present Status of the Thyroid Situation," illustrating by motion pictures his method of using local anesthesia.

A resolution was adopted unanimously, indorsing and commending the activities and untiring efforts of the local and state legislative committees during the present session of the General Assembly.

The program for May 23 included talks on "Student Health Service at Ohio State" by Dr. H. Shindle Wingert; "Intelligence Tests as A Prognostic Index of Student Attainment," by Dr. G. F. Arps; and "Congenital Syphilis," by Dr. Gertrude H. Transeau. The last meeting before the summer recess will be held on June 13, when the program will be given by the superintendent and staff of the Columbus State Hospital at the institution.

FIRST DISTRICT

Butler County Medical Society held its reg-

ular meeting in Middletown, April 13, with an attendance of thirty members from that city and Hamilton. Following a brief business session, Rev. F. A. Stiles made an address in which he spoke of the advances made in medical science, and of the advisability of suppressing quack doctors and cults.—News Clipping.

Highland County Medical Society met at the Parker Hotel, Hillsboro, April 13. Dr. Kelley Hale, Wilmington, gave an excellent talk on "Appendicitis," which provoked a lively discussion. The meeting was interesting and well attended. Dr. Hugh W. Chaney, Sugartree Ridge, and Dr. H. H. Lowe, Leesburg, are now president and secretary, respectively, of the Highland County Society.

SECOND DISTRICT

Clark County Medical Society, in session at Springfield, April 13, enjoyed an address on "Heart Beat," by Dr. Roger S. Morris, professor of internal medicine at the University of Cincinnati.—News Clipping.

Darke County Medical Society's excellent meeting of April 14, was attended by 25 members, two visitors and four essayists. The program follows: "Cancer of the Colon," Dr. Verne A. Dodd, Columbus; "Infant Feeding," Dr. A. G. Helmick, Columbus; "Endocrines—(a) Physiology and Pathology, Dr. N. D. Goodhue, Dayton;

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Miami County Medical Society held its April meeting in Troy on the 7th, with 22 physicians present. Dr. F. D. Kiser, Tippecanoe City, read a paper on "Infantile Paralysis," and Dr. R. C. Auston, Dayton, discussed "The Value of Basal Metabolism in the Diagnosis and Management of Goitre."—News Clipping.

Preble County Medical Society, which has been inactive during the winter, started off with a good meeting April 21, and the prospects are bright for the coming months. At this meeting the society elected its former secretary, Dr. S. P. Carter, West Manchester, president; Dr. E. P. Trittschuh, Lewisburg, vice-president, and Dr. H. Z. Silver, Eaton, secretary-treasurer.

THIRD DISTRICT

Marion County Medical Society, in session April 5, heard an interesting and instructive paper on "Nitrous Oxide Anesthesia," by Dr. D. O. Weeks. The paper was discussed by Drs. Mouser, Murphy, Newhouse and Weeks.—J. A. Dodd, Secretary.

FOURTH DISTRICT

Sandusky County Medical Society met at the Hotel Burdette, Bellevue, April 28, with Drs. Shumaker, Wier and Good as hosts of the occasion. After a chicken dinner there was the usual business session, followed by an excellent and timely talk by Dr. F. C. Anderson, superintendent of the State Tuberculosis Sanatorium, Mt. Vernon, on the recognition, treatment and general handling of tuberculosis cases. The essayist exhibited a number of splendid plates. The general discussion participated in by nearly every one present disclosed considerable difference of opinion but proved very helpful.—C. I. Kuntz, Secretary.

FIFTH DISTRICT

Erie County Medical Society held a joint meeting with the North Central Ohio Dental Society in Sandusky, April 13. An illustrated lecture on "Some Newer Knowledge of Dental Infections and Their Local and Systematic Expressions," was given by Dr. Weston B. Price of Cleveland, who is well known for his research work. It was the universal opinion of those privileged to hear this lecture that it was one of the best they had ever heard.

The society held another enthusiastic meeting on April 28. After the adoption of a constitution and by-laws for the staff of Good Samaritan Hospital an interesting scientific program was rendered. Dr. J. D. Parker presented the placenta of twins. The cord of one had been wrapped about the neck of the other child, resulting in the spontaneous amputation of the cord. Dr. F. B. Hubbard presented a paper on "A Collective Investigation of Medicine and Disease." Dr. William Story discussed the question,

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"Epilepsy, What Is It?"—F. F. Lehman, President.

Lake County Medical Society's meeting of May 2, held at the Painesville Y. M. C. A., was addressed by Dr. George W. Crile of Cleveland, on "Differential Diagnosis in Abdominal Conditions." The essayist spoke first of the diagnosis of appendicitis, especially in babies and the aged; later of the diagnosis of duodenal and gastric ulcers; and lastly of cancer of the stomach. With the exception of a picnic session planned with Ashtabula County Society for June at Madison-on-the-Lake, the society will hold no further meetings until September.—E. S. Jones, Secretary.

SIXTH DISTRICT

Richland County Medical Society had as its guest at a banquet on April 28, Major Henry Ladd Stickney, director of the Seventh District of the United States Public Health Service, including Ohio, Indiana and Kentucky. Dr. Stickney spoke on "Rehabilitation—An Aftermath of the World War." The society adopted resolutions opposing the administration of anesthetics by nurses.—News Clipping.

Wayne County Medical Society, in regular session at Wooster, April 12, elected Dr. O. G. Grady of Orrville secretary-treasurer to fill the unexpired term of Dr. Fred Snyder, who has removed to Ashland County.—O. P. Ulrich, President.

SEVENTH DISTRICT

Columbiana County Medical Society met at the Salem City Hospital, April 12, with physicians from East Liverpool, Wellsville, Lisbon, Columbiana, East Palestine and Leetonia in attendance. The scientific program included an address by Dr. E. A. Weiss, of Mercy Hospital, Pittsburgh, on "Pelvic Inflammation."—News Clipping.

Jefferson County Medical Society held its usual monthly luncheon meeting at the Steubenville Y. M. C. A., May 10, followed by presentation and reports of clinical cases, and reports from members who attended the Columbus annual meeting.—J. R. Mossgrove, Secretary.

Tuscarawas County Medical Society, in session at Dover, May 12, heard an address on "Digitalis" by Dr. Edgar C. Davis, and the report of the delegate to the seventy-fifth annual meeting.—P. J. Alspaugh, Secretary.

EIGHTH DISTRICT

Licking County Medical Society's essayist on April 28 was Dr. J. P. Stedem, who spoke on "The Management of Difficult Labor."—W. E. Shrontz, Secretary.

Muskingum County Medical Society held its May meeting in Zanesville on the 11th. The program included papers by Drs. E. R. Brush and Granville Warburton. The former's subject was "Early Treatment of Cranio-Cerebral Injuries" and the latter's "The Artificial Feeding of Infants."—Maurice Loebell, Secretary.

NINTH DISTRICT

Scioto County Medical Society held an interesting and well attended meeting in Portsmouth on April 11. Dr. J. L. DeCourcy, Cincinnati, read a good paper, accompanied by motion picture illustrations, on "Local Anesthesia in Major Operations."—Harry Rapp, Secretary.

TENTH DISTRICT

Crawford County Medical Society, in session at Bucyrus, April 21, had as its guest Dr. John Dudley Dunham of Columbus, who presented an interesting paper on "Diagnosis in Internal Medicine." Resolutions opposing the administration of anesthetics by nurses, similar to those published in previous issues of *The Journal*, were adopted by the society. Applications of five physicians for membership were presented and referred to the board of censors.—H. S. McClure, Secretary.

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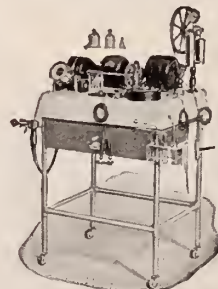
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Narcotic Registry and Tax Due July 1st

The Collector of Internal Revenue for Ohio has just issued to Ohio physicians Form 678, Return for Registry and Special Tax Stamp for opium, etc. Revised Regulations No. 35 provide that this form must be completed and transmitted to the office of the collector, accompanied by a remittance of the amount of tax applicable to the class in which the physicians belongs not later than July 1. Classifications and rates are printed on the back of the form. Owing to the immense volume of business incident to the collection of the income tax and other special taxes, during the month of June, the department urges physicians to register and remit their tax as early as possible.

During the past year there was a large number of delinquents. They were assessed an additional 25 per cent. and for a second delinquency will be subject, in addition to the 25 per cent. penalty, to a specific penalty for doing business without payment of tax.

All persons who handle or dispense perparations and remedies exempt under Section 6 of the Narcotic Laws, are required to be registered in Class 5. The tax is one dollar per annum or fractional part thereof, but is due only from those persons who are not registered in any other class. Physicians, therefore, who are registered and pay tax in one or more classes, are required to register in Class 5, but no tax liability is attached. Forms for this purpose have been mailed to those who have registered in Class 5 during the past year, and all others not so registered are requested to apply to the collector's office for like forms.

In order that physicians may familiarize themselves with the narcotic laws the Department of Internal Revenue will gladly furnish copies of Regulations No. 35 on request.

Cincinnati Using Schick Test

A promising step toward the reduction of diphtheria cases was taken recently by the bureau of child hygiene of the Cincinnati Health Department in bringing to the attention of parents and guardians of that city, by means of a circular letter, the value of the Schick test in ascertaining the capability of a child to take diphtheria, and toxin-antitoxin immunization in case the child is found susceptible. With the letter was enclosed a blank form to be filled in by the parent or guardian, requesting that the test be made and protective steps taken if found necessary.

Health Commissioner Peters reports that there has been a gratifying response and that tests are now being given in school buildings under the direction of his department in cooperation with the Children's Department of the General Hospital and the Medical College of the University.

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This is but part of Victor Service. After a Victor machine is installed the nearest Victor Service Station may be called upon when it needs attention. Compare this with the system which involves extensive correspondence with a distant factory, the sending of some local electrician, unfamiliar with X-ray apparatus, to make repairs, and perhaps the shipping of the entire machine to the factory after failure. The man sent by the nearest Victor Service Station is an expert. He is trained to locate the source of trouble quickly. Moreover, the physician who owns Victor equipment may always call upon the nearest Victor Service Station for mechanical and electrical guidance, so that he may be sure of his results.

Victor Service also includes the publication of a periodical called "Service Suggestions," in which X-ray progress is recorded. Although published primarily for the benefit of Victor clients it will be sent to physicians who wish to learn of the advances that are made from time to time in radiography. There is no charge for "Service Suggestions."

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CORRECTED ROLL OF DISTRICT AND COUNTY SOCIETIES

Societies	President	Secretary
First District G. D. Lummis, Middletown.....Eric Twachtman, Cincinnati....		
Adams.....	Titus Stephenson, Winchester..	O. T. Sproull, West Union.....3d Wednesday in April, June, Aug., Oct.
Brown.....	R. B. Hannah, Georgetown.....	Geo. P. Tyler, Jr., Ripley.....4th Wednesday in Feb., May, and Nov.
Butler.....	James G. Grafft, Trenton.....	F. M. Fitton, Hamilton.....2d Wednesday, monthly
Clermont.....	A. D. Spence, Bethel.....	O. C. Davison, Bethel.....3d Wednesday, monthly
Clinton.....	F. A. Peele, Wilmington.....	Kelley Hale, Wilmington.....2d Thursday, monthly
Fayette.....	H. L. Stitt, Wash'gton C. H.....	Lucy Pine, Washington, C. H.....1st Thurs., March, June, Sept. Dec.
Hamilton.....	H. Kennon Dunham, Cin'nati.....	O. J. Seibert, Cincinnati.....Monday evening of each week
Highland.....	H. W. Chaney, Sugartree Ridge..	H. H. Lowe, Leesburg.....1st Wednesday in Jan., April, July, and Oct.
Warren.....	S. S. Stahl, Franklin.....	Herschel Fisher, Lebanon.....1st Tuesday in May, June, July, Sept., Oct. and Nov.
Second District.		
Champaign.....	David H. Moore, Urbana.....	J. F. Shultz, Urbana.....2d Thursday, monthly
Clark.....	William Ultes, Springfield.....	R. R. Richison, Springfield.....2d and 4th Monday each month
Darke.....	E. A. Fisher, Yorkshire.....	A. F. Sarver, Greenville.....2d Thursday each month
Greene.....	W. A. Galloway, Xenia.....	C. H. Denser, Xenia.....1st Thursday each month except July and August
Miami.....	J. B. Barker, Piqua.....	G. J. Hance, Troy.....1st Thursday each month
Montgomery.....	A. F. Shepherd, Dayton.....	R. C. Austin, Dayton.....1st and 3d Friday each month
Preble.....	S. P. Carter, W. Manchester.....	H. Z. Silver, Eaton.....3d Thursday, monthly
Shelby.....	A. W. Hobby, Sidney.....	V. W. LeMaster, Sidney.....1st Thursday, monthly
Third District..		
Allen.....	C. H. Clark, Lima.....	J. R. Tillotson, Lima.....1st and 3d Tuesdays
Auglaize.....	W. S. Stuckey, Wapakoneta.....	C. L. Mueller, Wapakoneta.....3d Thursday, monthly
Hancock.....	W. J. Zopfi, Findlay.....	Nelia B. Kennedy, Findlay.....1st Wednesday, monthly
Hardin.....	D. H. Bowman, Kenton.....	W. A. Belt, Kenton.....1st Thursday, monthly
Logan.....	F. B. Kaylor, Bellefontaine.....	M. L. Pratt, Bellefontaine.....1st Friday, monthly
Marion.....	H. L. Uhler, Marion.....	J. A. Dodd, Marion.....1st Tuesday, monthly
Mercer.....	J. P. Symons, Rockford.....	D. H. Richardson, Celina.....2d Tuesday, monthly
Seneca.....	J. A. Gosling, Tiffin.....	E. H. Porter, Tiffin.....3d Thursday, monthly
Van Wert.....	S. A. Edwards, Middlepoint.....	N. E. Leake, Van Wert.....2d and 4th Monday, monthly
Wyandot.....	Frederick Kenan, U. Sandusky..	B. A. Moloney, U. Sandusky.....1st Thursday, monthly
Fourth District. (With Third District in Northwestern Ohio District) Tiffin, Oct. 26-27		
Defiance.....	W. S. Powell, Defiance.....	F. W. Watkins, Defiance.....2d Wednesday, bi-monthly
Fulton.....	W. L. Lathrop, Metamora.....	R. W. Reynolds, Fayette.....Semi-monthly
Henry.....	Charles Mowry, Napoleon.....	C. H. Skeen, Napoleon.....3d Wednesday, monthly
Lucas.....	L. A. Levison, Toledo.....	J. F. Wright, Toledo.....Friday, each week
Ottawa.....	A. A. Brindley, Pt. Clinton.....	S. T. Dromgold, Elmore.....2d Thursday, monthly
Paulding.....	Ray Mouser, Latty.....	R. J. Dillery, Paulding.....3d Wednesday, monthly
Putnam.....	P. D. Bixel, Pandora.....	H. A. Neiswander, Pandora.....1st Thursday, monthly
Sandusky.....	E. W. Baker, Clyde.....	C. I. Kuntz, Fremont.....last Thursday, monthly
Williams.....	W. L. Hogue, Montpelier.....	J. A. Weitz, Montpelier.....2d Thursday, each month
Wood.....	J. W. Rae, Bowling Green.....	F. V. Boyle, Bowling Green.....2d Thursday, monthly
Fifth District.(No District Society)		
Ashtabula.....	R. B. Wynkoop, Ashtabula.....	J. J. Hogan, Ashtabula.....2nd Tuesday, monthly
Cuyahoga.....	W. B. Chamberlin, Cleveland.....	Lester Taylor, Cleveland.....Every Friday evening
Erie.....	F. F. Lehman, Sandusky.....	H. N. Sarchett, Sandusky.....Last Thursday, monthly
Geauga.....	J. A. Heeley, Parkman.....	Isa Teed-Cramton, Burton.....2d Thursday, Jan., March, July and Sept.
Huron.....	R. L. Morse, Norwalk.....	J. D. Coupland, Norwalk.....2d Thursday, monthly
Lake.....	V. H. Tuttle, Madison.....	E. S. Jones, Painesville.....1st Monday, monthly

Societies	President	Secretary
Lorain.....	J. R. Pipes, Avon Village.....	W. E. Hart, Elyria.....2d Tuesday, monthly
Medina.....	M. F. Miller, Wadsworth.....	H. P. H. Robinson, Medina.....3d Wednesday
Trumbull.....	R. R. Rogers, Warren.....	John D. Knox, Warren.....3d Thursday monthly except June, July and August

Sixth District...

Ashland.....	C. C. Patton, Ashland.....	D. H. Mohn, Ashland.....1st Tuesday, Jan., March, May, July, Sept., Nov.
Holmes.....	J. C. Elder, Nashville.....	A. T. Cole, Millersburg.....1st Tuesday, monthly
Mahoning.....	W. E. Ranz, Youngstown.....	H. E. Patrick, Youngstown.....3d Tuesday, monthly
Portage.....	W. B. Andrews, Kent.....	E. H. Knowlton, Mantua.....2d Thursday, monthly
Richland.....	G. C. Smith, Mansfield.....	Chas. R. Keller, Mansfield.....3d Thursday, monthly
Stark.....	Perry King, Alliance.....	George S. Hackett, Canton.....3rd Tuesday, Jan., March, May, July, Sept., Nov.
Summit.....	R. V. Luce, Akron.....	A. S. McCormick, Akron.....1st Tuesday, monthly
Wayne.....	O. P. Ulrich, Orrville.....	O. G. Grady, Orrville.....2d Tuesday, Jan., April, July, Oct.

Seventh District

Belmont.....	R. H. Wilson, Martins Ferry.....	J. S. McClellan, Bellaire.....2d Wednesday, monthly, at 1:45 p. m.
Carroll.....		
Columbiana.....	P. C. Hartford, E. Palestine.....	C. R. Larkin, East Liverpool.....2d Tuesday, monthly, alter- nately, in Lisbon, Salem and E. Liverpool
Coshocton.....	D. Edmund Cone, Coshocton.....	J. D. Lower, Coshocton.....4th Thursday, April, June, Sept., Dec.
Harrison.....	H. I. Heavilin, Cadiz.....	R. P. Rusk, Cadiz.....1st Wednesday, monthly
Jefferson.....	F. H. Riney, Mingo Junction.....	J. R. Mossgrrove, Steubenville.....2d Tuesday, monthly
Monroe.....		J. H. Pugh, Woodsfield.....2d Wednesday, monthly
Tuscarawas.....	A. C. Dempster, Uhrichsville.....	P. J. Alsbaugh, N. Philadelphia.....2nd Thursday, monthly

Eighth District.

Athens.....	W. S. Rhodes, Nelsonville.....	T. A. Copeland, Athens.....1st Tuesday, monthly
Fairfield.....	Ralph Smith, Lancaster.....	R. W. Mondhank, Lancaster.....2d and 4th Tuesday, monthly
Guernsey.....	C. A. Moore, Cambridge.....	F. M. Mitchell, Cambridge.....1st and 3d Tuesday each month
Licking.....	Carl Evans, Newark.....	W. E. Shrontz, Newark.....Last Thursday, monthly
Morgan.....	C. V. Davis, Pennsville.....	D. G. Ralston, McConnellsville.....1st Wednesday, monthly
Muskingum.....	C. U. Hanna, Zanesville.....	Maurice Loebell, Zanesville.....1st Wednesday, monthly
Noble.....	G. H. Zimmerman, Belle Valley.....	J. L. Gray, Caldwell.....1st Thursday, monthly
Perry.....	J. C. Sommers, Somerset.....	C. B. McDougal, N. Lexington.....3d Thursday, monthly
Washington.....	E. W. Hill, Jr., Marietta.....	A. G. Sturgiss, Marietta.....2d Wednesday, monthly

Ninth District...

Gallia.....	C. G. Parker, Gallipolis.....	Milo Wilson, Gallipolis.....1st Wednesday, monthly
Hocking.....	O. V. Donaldson, Gore.....	M. H. Cherrington, Logan.....
Jackson.....	A. G. Ray, Jackson.....	R. W. Caldwell, Jackson.....1st Tuesday, monthly
Lawrence.....	O. H. Henninger, Ironton.....	E. E. Ellsworth, Ironton.....1st Thursday, monthly
Meigs.....	P. A. Jividen, Rutland.....	L. A. Thomas, Middleport.....1st Wednesday, April, July and Oct.
Pike.....	F. C. Metzger, Waverly.....	L. E. Wills, Waverly.....1st Monday, monthly
Scioto.....	Tunis Nunemaker, Portsmouth.....	Harry Rapp, Portsmouth.....2d Monday, monthly
Vinton.....	O. S. Cox, McArthur.....	H. S. James, McArthur.....4th Wednesday, monthly

Tenth District...

Crawford.....	R. J. Caton, Bucyrus.....	H. S. McClure, Bucyrus.....2d Thursday, monthly
Delaware.....	I. T. McCarty, Delaware.....	Rees Philpott, Delaware.....1st Friday, each month
Franklin.....	G. C. Schaeffer, Columbus.....	James A. Beer, Columbus.....1st four Mondays
Knox.....	H. W. Blair, Mt. Vernon.....	C. D. Conard, Mt. Vernon.....2d and 4th Wednesday, from March to middle of Dec.
Madison.....	L. E. Evans, West Jefferson.....	H. V. Christopher, London.....4th Thursday
Morrow.....	R. L. Pierce, Mt. Gilead.....	Todd Caris, Mt. Gilead.....1st Wednesday, monthly
Pickaway.....	J. B. May, New Holland.....	D. V. Courtright, Circleville.....1st Friday, monthly
Ross.....	G. E. Robbins, Chillicothe.....	G. S. Mytinger, Chillicothe.....1st Tuesday, monthly
Union.....	C. O. Thompson, Raymond.....	E. J. Marsh, Broadway.....2d Tuesday

NEWS NOTES OF OHIO

Bucyrus—Dr. A. J. Brainard, a former resident of this city, has returned from Chicago, where he spent six months in post-graduate study of the eye, ear, nose and throat.

Cincinnati—Dr. and Mrs. Albert Brueggeman have filed suit against a local traction company for damages for injuries received last October when their automobile collided with a street car.

Cleveland—Dr. A. R. Warner, executive secretary of the American Hospital Association, and Miss Gertrude Schnaitter of Sandusky, were married, April 30. Dr. Warner served as superintendent of Lakeside Hospital, this city, for seven years, and his bride was a member of the nursing staff. Both were members of the Red Cross unit which the hospital sent abroad during the war.

Cleveland—Dr. George W. Crile was a speaker at the 123rd annual meeting of the Medical and Chirurgical Faculty of Maryland, April 27.

Columbus—The fifty-seventh annual meeting of the Homeopathic Medical Society of Ohio was held at the Hotel Deshler, May 10-11. The Ohio Eclectic Medical Society met for its annual session at the Southern Hotel, May 17-19.

Franklin—Dr. H. J. Death, who suffered a stroke of paralysis April 17, while making a professional call, is reported improved.

London—Dr. F. E. Rosnagle was relieved of his watch, money and automobile, May 9, when he responded to a supposedly bona fide call for aid and was robbed a short distance from his office. The automobile was recovered in the suburbs of Springfield.

Marion—Dr. Carl Sawyer was chosen president of the Rush Medical College Alumni Association at its annual banquet in Columbus, May

Dover—Dr. Samuel Shaweker miraculously escaped injury May 13, when his automobile was struck by a traction car.

For Rent—Suite of four desirable office rooms for physician in Clark-Rogers Building, just east of Fourth on E. State St. Will divide suite. Dr. C. F. Clark, 188 E. State St., Columbus.

Ohioan on Honored List

Dr. George W. Crile of Cleveland is among a number of American surgeons on whom the Council of the Royal College of Surgeons of Ireland has announced it will confer honorary fellowships. Others so honored are Drs. W. J. and C. H. Mayo, Rochester; George Brewer, New York; Richard H. Marte and W. W. Keen, Philadelphia; John M. T. Finney, Baltimore, and A. J. Ochsner, Chicago.

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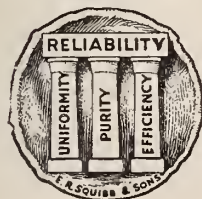
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EDITORIAL COMMENT

by D. K. M.

Ohio Again Points the Way

Whatever the Ohio State Medical Association has accomplished in worth-while activities and in benefits and service has been due to the support and cooperation of yourself and the other individual members. That you have set the example in medical organization for other states has been indicated repeatedly in the past.

With the presentation to the house of delegates of the American Medical Association of a resolution introduced by Dr. J. H. J. Upham, a delegate from Ohio, and chairman of the Committee on Public Policy and Legislation of the Ohio State Medical Association, and its reference to the trustees of the A. M. A. for action, the progress in national organization, patterned in a measure after successes attained in this state, should be of service not only to the profession but to the public in a national way.

A further tribute to the successes attained by the Ohio State Medical Association is indicated in the selection of Dr. Upham as the chairman of the all-important Committee on Legislation and Public Relations at the Boston meeting, and the high place which he and the other Ohio delegates held in the deliberations and proceedings at that convention.

Dr. Upham's resolution follows:

WHEREAS, The activities of the American Med-

ical Association have sometimes been circumscribed and its service to humanity limited by a lack of coordination in the separate policies of the component state medical associations, and

WHEREAS, The effectiveness of organized medicine as a national institution has been hampered by conflicting programs of activities in the various state medical associations, largely due to the want of full information on subjects of national scope and general importance, and

WHEREAS, The American Medical Association has rendered to the public a distinct service through its investigation of quackery and nostrums, but which information unfortunately has been given limited circulation, and

WHEREAS, It is the duty of the American Medical Association and the component state associations to point the way in those movements looking toward disease prevention, health preservation and public welfare, therefore, be it

Resolved, That as delegates representing the various state medical associations we pledge our full and hearty support to the American Medical Association in its ideals and purposes; that we pledge ourselves to closer and more harmonious cooperation to the end that organized medicine may render a greater service to the nation and its citizens as well as in the maintenance of high standards and lofty ideals in professional practice; that in the attainment of this object that we urge the inauguration of a service and information bureau with perhaps an enlarged propaganda department in the American Medical Association; that a bulletin service be instituted from the headquarters of the American Medical Association for the purpose of constantly keeping the executive secretaries of the various state associations informed on proposals in federal legislation and activities by various national bodies and organizations in any way pertaining to problems or regulations on public health and medical practice; that the American Medical Association be encouraged and supported in its proposal to establish the publication of a public health journal as a forum through which the laity may be better informed on medical and health problems; that the staff of the American Medical Association be arranged and so enlarged if need be for the proper contact with federal departments and bureaus in any way dealing with problems on public health and medical practice; that the staff of the American Medical Association be encouraged and supported in the delegation of field secretaries for the purpose of establishing more candid and cordial relations between the profession in the several states and the American Medical Association.

In submitting the foregoing resolution, the following comment in explanation was made:

"The intention of this resolution is to more effectively bind together the various state medical associations in support of the program and purposes of the American Medical Association, the activities of which have at various times been obstructed by the conflicting policies of the various component state associations, based on the experience in the Ohio State Medical Association where the thought and sentiment of the entire profession is crystallized and harmonized through frequent bulletins on public policy and legislation, directed from the headquarters of the State Association to a "key man" in each component county society who is charged with the duty of disseminating such information, and

securing the united support of the entire profession on matters of common interest in the respective committees, which supplements *The Journal* or official organ of the Association, and the other coordinated organization activities.

"Based on this plan, it is respectfully urged that a similar service be inaugurated in the American Medical Association and directed to the executive secretaries of the component state associations, whose duty it should be to immediately refer the valuable information thus secured to the proper committees or departments of the association to which he is directly responsible. This special bulletin service should not only include proposed and pending federal legislation of direct interest to the medical profession, but proposed plans, regulations and rulings of various federal departments and brief resumes of constructive activities inaugurated in various state associations which might be adopted and followed with benefit by other associations. This bulletin service, if inaugurated, should not become a regular or formal communication, but should be issued as frequently as the need warrants, either in regular form, by special letter or even telegraph.

"And while heartily endorsing the excellent purpose of the American Medical Association, as contemplated in the department in *The Journal* on propaganda for reform, it is believed that this service might be greatly enhanced by a properly supervised department on education or publicity in the American Medical Association as a function in educational work directed to the public in matters of disease prevention, sanitation, public health, and protection against quackery. Such service would contemplate direct and constant contact with various federal departments and bureaus, with the possibility of properly guiding educational efforts and propaganda emanating from the United States Public Health Service, and from other official and semi-public agencies interested in and concerned with the problems of public health.

"It is believed that a more thorough cooperation with the educational system in the several states and nation as well as with health and welfare agencies, particularly women's organizations largely concerned with such problems, would be fruitful of results."

In speaking on the resolution, Dr. Upham emphasized the need of better education of the public in regard to the principles of medical service. He pointed out that in order to gain the approval and support of the public for better trained physicians it is essential that the public thoroughly understands the reason and purpose of such advancement. He pointed out the possibility along educational lines, of cooperation with school authorities in the instruction of the youth, in health problems and the value and necessity of scientific service in coping with disease and contagion. He also stated that the medical pro-

fession not only has a great opportunity, but a direct responsibility in advising and guiding the various educational efforts in health matters concerning which there has been too much misunderstanding and misinformation.

The Sheppard-Towner Bill

As stated in our news columns, the Senate Committee on Education and Labor, May 20, reported favorably on the Sheppard-Towner bill. This bill, considerably amended, now provides for the appropriation of \$1,480,000, \$10,000 to be paid to each state and \$1,000,000 to be apportioned among the states in proportion to their population, no part of the prorated amount to be paid until an equal sum shall have been appropriated by the legislature of the state for the purposes provided for in the act. The Children's Bureau is made responsible for the administration of the act; the chief of the Children's Bureau is directed to form an advisory committee consisting of the Secretary of Agriculture, the Surgeon-General of the United States Public Health Service and the United States Commissioner of Education. Not more than 3 per cent. of the total appropriation may be used for administration expenses. Any state desiring to avail itself of the benefits of the act must submit to the Children's Bureau a detailed plan for instruction in the hygiene of maternity and infancy through public health nurses, concentration centers and other suitable methods. To meet the objections of the advocates of personal liberty, an amendment provides that no state official or agent or any of the employees of the Children's Bureau shall have the right to enter any home over the objections of the parents. The report of the committee is practically the same as the report of the Senate committee on the same bill in the last session of Congress. It repeats the statement that the United States stands seventeenth among civilized nations in its maternal death rate; that most of this loss could be prevented by proper prenatal instruction, and that the bill has the unanimous approval of women throughout the country. As stated in a previous issue, *The Journal* does not favor this measure, since:

(1) The principle of federal state aid as a means of financing public health is an unsound financial policy.

(2) Public health work, except those activities which are clearly national in character, is essentially a function of the state and local government and should be paid for out of state and local funds.

(3) No such emergency exists as has been claimed, and there are no reliable statistics by which it can be proved that the United States stands seventeenth in maternal death rate.

(4) The means provided in the bill will not af-

ford an effective remedy for existing conditions, and

(5) And most important, if the federal government intends to inaugurate activities for the care of maternity and infancy or for any other public health measure, such work should be placed in the hands of the United States Public Health Service rather than under a bureau of the Department of Labor.—*Jour. A. M. A.*

The Country Doctor

Dr. James Ball Naylor, in *Marion Star*

When I git to musin' deeply
'Bout them times that used to be,
An' the swellin' tide o' mem'ry
Comes a-sweepin' over me,
Then among the wrecks o' long ago
That's driftin' on the crags,
I can see the country doctor—
With his leather saddle-bags.

With his crown so bare and shiny
An' his whiskers white as snow,
With his nose jest like a piney
That's beginnin' fer to blow;
For he painted it with somethin'
From his bottles in his kags,
That he alluz carried with him—
In his rusty saddle-bags.

What are we to do for rural physicians—country doctors? The old fellows are all flocking to the large towns and cities—where the work is easier and the rewards are larger. Says *The Ohio State Journal*:

"Many of the small towns and villages of New England have no resident doctors. In numerous instances there is no doctor within easy call. Distressing situations have developed repeatedly while sufferers waited for a doctor called from a city. Conditions have been so bad that the members of some eastern legislatures have been asked to study the plan of appropriating state funds to induce doctors to locate in small places, so medical attention would be available and the needs of the community be cared for."

What's to be done in the matter? For something must be done. Not only are the country doctors rare in New England, but they are becoming rare in Ohio—and in many other mid-Western and Western states. In one rural county of Ohio, in the southeastern hill section, I can count 10 villages and hamlets that formerly had resident physicians, but they have none today. The people of these lone communities are very unfortunately situated and conditioned. In cases of need and urgency they must wait long for medical and surgical aid—even when the roads are good; and when the roads are bad, as they are about six or eight months of the year—they must wait indefinitely, or go without doctors at all. I have known children to be born with-

out a physician being procurable; I have known cases of pneumonia to go without adequate treatment—for the same reason.

What's to be done? The old country doctor will soon be only a blessed memory.

I can see him with his glasses
Set a-straddle of his nose,
With his broad-rimmed loppy, beaver
An' his loose, ol-fashioned clo'es;
I can see him tyin' at the gate
The laziest o' nags,
An' come puffin' up the pathway—
With his heavy saddle-bags.

But he started on his travels,
Many, many years ago,
Fer the place where life unravels
An' dividin' waters flow;
So I hope he's reached the haven
Where no anchor ever drags,
An' has landed safe in heaven—
With his shinin' saddle-bags!

Ideal Health Education

The teaching of health fundamentals to children, a form of health protection and disease prevention propaganda which the State Medical Association has ardently advocated through its special committee on health education, is pleasingly and practically demonstrated in the artistic pageant, "Health Wins!" being presented in various parts of the state by school children. It is a spectacular production given under the auspices of the Ohio Public Health Association as part of its Modern Health Crusade, with the ultimate object of stimulating interest in the adoption of a health curriculum as part of a state system of education under the supervision of the Department of Public Instruction.

The pageant, described and illustrated elsewhere in this issue, has met with unqualified success at every presentation and its wide use throughout the state is to be encouraged. It teaches that health is a joyous, dazzling achievement. "Health Wins" is an excellent motto.

Luke McLuke Said

We believe in publicity unless the publicity comes in the form of an advertisement telling how many bottles of Piffle's Patent Pruno it took to cure you of your otherwise fatal ailments.

We may be wrong. But it is our impression that any man who is strong enough to take patent medicine didn't have much the matter with him.

Surgical Neuralgia of the Fifth Cranial Nerve*

L. H. Landon, M.D., F.A.C.S., Pittsburgh,
Surgeon to the Hospital of Western Pennsylvania.

Editor's Note.—Favoring as he does resection of the sensory root for surgical neuralgia of the fifth cranial nerve, Dr. Landon considers it most unfortunate that an opinion still prevails that this newer procedure is attended by the same prohibitive mortality associated with gasserectomy. Quite the contrary is the truth for Frazier's and his own clinic now total 195 consecutive operations of this sort with a mortality of only 0.5 per cent. and with a negligible incidence of post-operative eye complications. Hence it is that Dr. Landon pleads for a substitution of sensory root resection for any other procedure and especially to replace alcoholic injections of the ganglion, which afford only temporary relief, must be repeated and leave the parts in very bad condition for eventual and almost inevitable surgical interference. While a small percentage of so-called fifth nerve neuralgias may be relieved by clearing up some focus of infection the vast majority can only be permanently relieved by the radical operation and now that sensory root resection can be made so safe an operation, Dr. Landon maintains that it should be advised and performed much earlier than is the custom.

THE DETECTION that the trunks of the peripheral nervous system are connected to the brain and spinal cord in pairs, that each is composed of an anterior and posterior bundle or root, the differences in function of the two roots and the similarity of the cranial and spinal nerves, constitutes the foundation upon which the entire superstructure of modern knowledge of the anatomy and physiology of the peripheral nervous system rests. That these facts, as well as that the sensibility of all surfaces to which they are distributed is traceable to the glanglionic roots, were the results of Bell's study upon the trigeminal nerve, is of interest in connection with the clinical study of the unique condition with which this nerve is so frequently afflicted.

Inasmuch as all effective treatment of this neuralgia is and bids fair to remain purely surgical, the terms *Tic Douloureux*, *trifacial*, *trigeminal*, *major* and *essential*, might with propriety be discarded with the substitution *Surgical Neuralgia*. If by so doing its surgical nature may be sufficiently emphasized to save its many victims from the various procrastinating and useless efforts at its relief, it would be a step well taken.

ETIOLOGY AND SYMPTOMATOLOGY OF SURGICAL NEURALGIA

To the experienced observer the symptomology of surgical neuralgia is clear cut, characteristic, and with a few exceptions serves to definitely distinguish it from the pain of neuritic origin arising from local lesions in the peripheral distribution of the nerve or constitutional causes. On the other hand its etiology is completely obscured. While one may speculate as to its ganglionic origin from vascular and nutritional changes, painstaking search has failed to establish any constant or definite pathology. It is true that in many instances, operation reveals sclerotic changes in the skull, the dura and the dura propria about the ganglion but such conditions at the average age of these individuals,

would be expected to obtain without the neuralgia. Rarely we may encounter at operation a ganglion that appears to be the seat of active inflammation, while tumors either of the ganglion itself or in its immediate neighborhood are occasionally the cause of neuralgic pain indistinguishable from the idiopathic.

Unfortunately but quite naturally, some peripheral, most often dental, origin for the pain is commonly persistently insisted upon by both the patient and physician. As a result it is rare for the surgeon to see a case of surgical neuralgia which has not been subjected to every possible form of treatment directed toward such presumed foci. One after another the sound teeth of one or both jaws have been sacrificed, various sinuses have been fruitlessly explored and drained, the patients have been saturated with the old standbys strychnine and potassium iodide, until, from one to twenty years of torture serves to reduce them to disgusted, exhausted, hopeless wrecks coming to the surgeon as a last resort and with the *cure or die* spirit. It is remarkable how few in our experience have been the victims of narcotism.

The symptomology of surgical neuralgia is covered by the word pain, pain so agonizing, so typical and characteristic, so clearly defined and sharply delineated by the sufferer as to ordinarily preclude any uncertainty in diagnosis. Rarely appearing before middle life, it usually has its inception in one of the terminal branches of the second or third division of the ganglion, most frequently the infraorbital or mental. Unrelieved the pain eventually involves other branches until the entire second and third or occasionally all three divisions are affected. In our series of fifty-two cases bilateral involvement has been twice encountered.

There is a characteristic *periodicality* of attacks, each composed of *paroxysms* and *remissions* lasting from a few seconds to hours, seizures becoming progressively of longer duration and the periods shorter as time goes on. The important features of the pain are its clonicity or series of pangs, darting, shooting, burning, tearing along the course of the nerves involved

*Read before the First Annual Session, Ohio Section, Clinical Congress, American College of Surgeons, Cleveland, April 2, 1921.

and its precipitation during an attack, upon the slightest provocation as talking, eating swallowing, laughing, slamming of doors, a breath of cold air, washing the face, combing the hair and the slightest touch upon certain skin areas as the ala of the nose, the upper lip or over the mental foramen.

POINTS IN DIFFERENTIAL DIAGNOSIS

While this typical history of onset, site, character and progressive extension of the pain to other branches usually easily identifies major trigeminal neuralgia, I would not leave the impression that the diagnosis is free from difficulties and pitfalls for the unwary. Reference has already been made to the pain occasionally accompanying intracranial neoplasms. Ordinarily however, careful study will reveal other signs of these lesions incompatible with simple surgical neuralgia. Malignant invasion of the pterygomaxillary fossa by oral tumors at times is the cause of such constant and severe pain in the second or third division of the ganglion as to call for palliative surgical interference, alcoholic injections of the nerves or the ganglion. The surgeon is seldom confronted with more pathetic supplicants for relief or rewarded with greater gratitude for rendering more bearable their miserable and hopeless existence.

Nor should one be unmindful of other forms of neuralgia of major type occurring within the area of trigeminal distribution, but the origin of which is outside the trigeminal system. Unrecognized they may lead to useless and misdirected surgery. I refer first to that rare form attributed to lesions of the gemiculate ganglion, the principal feature of which is otalgia but in which the pain may overflow into the fifth nerve distribution. Involvement of this ganglion may also explain those cases of tic spasmodic accompanied by facial neuralgia in which the surgeon unaware of the possibilities has been led to disappointing operations upon the trigeminus; second, the neuralgia exhibiting the clinical picture constructed by Sluder, the cause of which is attributed to involvement of the nasal or ganglion of Meckel, characterized by pain referred to the root of the nose, the orbit, the ear, to the occiput, shoulder, and arm, occasionally to the tonsil and pharynx, and accompanied almost invariably by a point of tenderness immediately behind the mastoid tip.

Briefly as we have from necessity mentioned these causes of facial pain it should be clear that their clinical picture differs from and should when encountered prevent one from making the error of assuming the diagnosis of *tic douloureux*.

TREATMENT

Let us now turn to a consideration of the treatment of *tic douloureux*. Discussion of any other than surgical measures for its temporary or per-

manent control is futile. There is none. Of the palliative procedures peripheral evulsion of the terminal branches has with one exception been supplanted by alcoholic injection into the ganglionic divisions at or near their exit from the base of the skull or the ganglion itself via the forearm ovale. Evulsion of the supraorbital branch when the first division is involved remains preferable to injection since the injection of the division itself is impossible while that of the supraorbital is usually unsatisfactory. In all other instances by employing the injection treatment the patient escapes the thought of being cut; no undesirable scarring results while the duration of relief following the installation of alcohol into the nerves is longer on the average than that following their peripheral removal. While occasionally relief for two or three years is obtained, the average relief from the injection treatment is nine months, that from evulsion about eight.

It is not my intention to discuss the technique of alcoholic injection. Methods vary in minor details but to be effective the alcohol must be actually instilled within the nerve trunks and not perineurally. There is frequently encountered a woeful ignorance as to what the alcoholic injection contemplates. We frequently see patients who are said to have had alcoholic injections but in whom upon examination we find that the alcohol has been injected subcutaneously into the various parts of the face or forehead at points where the pain is most severe; a harmless perhaps but withal a pathetic exhibition. Confidence and skill from training and experience are as necessary for success in the injection treatment as in the more radical operative procedure, otherwise failure to relieve or actual injury to important structures will often result. Personally the injections are frequently technically more difficult than cutting of the sensory root of the ganglion.

A disagreeable feature of the injection is the intense pain immediately accompanying the entrance of the alcohol into the nerve. While momentary, it smacks of brutality and patients cannot understand why a general anesthetic should be denied nor is it necessary that it should be. Successful injection by one experienced is quite feasible under nitrous oxide or ethyl chloride inhalation. If carried only to the stage of analgesia, the patient gives unmistakable evidence when the nerve is entered and during the injection while no consciousness of pain will be experienced.

A word only as to the ganglionic injections, I believe we shall hear little of them in the future. It has of course its enthusiastic advocates but the great accuracy necessary and the depth to which the needle must be introduced make it even in the hands of the most dexterous a difficult, blind, procedure not unattended by the dangers of throwing the alcohol into the cavernous sinus, into the jugular vein, or even into the

pons and medulla. Again, the duration of relief from ganglionic injections is not appreciably greater than that following injection of the divisions while the marked incidence, 25 per cent. in Hartel's own series, of corneal complications following is a serious consideration.

Except in the few instances where age or other definite contraindications to any major surgical procedure obtain the decision as to the employment of alcoholic injections or the radical operation in any given case must rest largely upon the patient himself, the relative merits of the two methods of relief being clearly explained. He is told that the effects of the former are transitory, that if successfully injected the relief is immediate and absolute and will continue on the average for nine months, that successive alcoholic injections become technically more difficult and their effects of shorter duration; that on the other hand the radical operation assures absolute and permanent relief, that it is attended by little operative risk, and is not followed by disfigurement. The latter assurance is important as many patients and not a few physicians have the erroneous idea that facial paralysis, loss of the eye or other ghastly results are the common or almost necessary sequel of the operation. If early in the course of the disease, he will usually decide against operation and an injection is given. This may be repeated several times until at last in despair he asks for permanent relief. Many patients of course, have been through all this experience and readily submit at once to the more rational course.

THE RADICAL SENSORY ROOT OPERATION

The radical operation as now almost universally practised was proposed by Spiller in 1901, as a substitute for ganglionectomy. Its rationale is based upon the fact of the non-regenerative power of nerve fibres devoid of the sheaths of Schwann. By cutting the sensory root therefore, we eliminate the ganglion permanently from all central connection and just as effectively as if the ganglion itself were removed. The advantages of this procedure over the older methods are chiefly, control of hemorrhage, simple technique, avoidance of injury to the adjacent structures, reduction in mortality and greatly lessened dangers of post-operative tropic disturbances of the cornea. All these claims and others have become so firmly established as to require no defense at this time. For the elaboration of the technique and its valuable refinements from time to time we are indebted entirely to Frazier. As will be pointed out, its results, in every respect, are eminently satisfactory.

Patients should be in the hospital under observation for four or five days before the operation both for proper preparation and to substantiate the diagnosis.

In brief, the operation is done under endopharyngeal anesthesia with the patient in the sit-

ting position; this position is convenient for the operator, serves to minimize hemorrhage and less ether is required. The incision which we have found satisfactory is a straight one extending from the lower border of the zygoma, 1 c.m. in front of the ear upward and slightly backward for 8 c.m. With the exception of the lower extremity it lies entirely within the hairline and leaves no visible scar. The temporal fascia is incised and the fibres of the temporal muscles split in the line of the skin incision. At the lower end of the wound the temporal fascia is divided parallel with the zygoma for a distance of 1 c.m. in each direction, permitting an easier exposure of the subtemporal opening. The skull is opened with a Hudson drill and the opening enlarged to a diameter of 3 c.m. with the lower margin at the base of the skull, its center corresponding as nearly as possible to the center of the zygoma. This point lies nearest to the foramen orale. A tiny slit is made in the dura to permit the escape of cerebrospinal fluid which facilitates the raising of the temporal lobe and minimizes the amount of trauma to the brain. The remaining steps of the operation lie within the cranium. The dura is separated slowly and gently from the base of the middle fossa and about the bony opening in all directions. Using a special light carrying retractor the dura and overlying temporal lobe is raised until the foramen spinosum is seen with the entering middle meningeal artery. The foramen is tightly plugged with wax or cotton and the artery divided. Our next objective is the foramen orale lying just to the inner side of the foramen spinosum and giving exit to the third division, the unvarying guide to the ganglion. The dural reflection over the division is cut and by blunt dissection the dura propria is raised from the superior surface of the posterior third of the ganglion until the sensory root, sweeping over the petrous bone to enter the middle cranial fossa, is recognized. The root is isolated on all sides, picked up on a blunt hook and the motor root is identified as it lies below and to the inner side on its way beneath the ganglion to join the mandibular division. The sensory root is now deliberately divided with a small knife and we are ready for closure. At this point the anesthetic, light throughout, is stopped as the entire operative field lies within the area of anesthesia which follows immediately and is complete and permanent throughout the distribution of the fifth nerve on the side operated. The wounds in the temporal muscle, temporal fascia and skin are closed successively with interrupted sutures usually placing a soft rubber drain in the middle fossa, issuing from the lower angle of the wound and to be removed within twenty-four hours.

DISCUSSION

The ease and safety with which the patients of even advanced age undergo the operation is surprising. Convalescence is rapid, they are usually

up in three or four days, the stitches are out in six days and they are home in a week or ten days. Freedom from pain is followed by rapid improvement in their mental and physical condition. Immediately after operation the eye is covered with a goggle to be worn whenever out of doors, for a period of six months in order to avoid corneal complications.

Such a brief description of the operation necessarily omits many details and technical difficulties which may arise in the individual case. I do not desire to appear as dismissing the subject nonchalantly, nor as overlooking the fact that experience and skill are necessary factors for the success and overcoming of various problems and obstacles arising unexpectedly. Previous ganglionic injections or an old specific meningitis may result in such dense adhesions of the dura propria as to make the exposure of the ganglion and root a difficult and tedious procedure. Anomalies in the bony conformation of the floor of the skull and hemorrhage, or rather persistent oozing, may serve to harass the operator and tax his patience and resourcefulness to the utmost. Identification and preservation of the motor root may be difficult but is seldom impossible. The employment of electrical stimulation for this purpose is a valuable addition to the armamentarium. When the motor root is sacrificed, atrophy of the temporal, masseter, and pterygoid muscles follows. This not only results in some, although not serious inconvenience in the movements of the jaw, but atrophy of the temporal leaves a noticeable depression above the zygoma and therefore an imperfect cosmetic result.

As to the risks attending the radical operation on the sensory root it is unfortunate that most text books and many writers make no discrimination between this operation and the older one of gasserectomy and attribute to it a mortality ranging from 20 to 30 per cent. There is an extraordinary misconception on the part of the profession as to what this operation contemplates. Exposure of the sensory root was an early detail in gasserectomy while the causes of the high mortality, tearing into the cavernous sinus, injury to the third, fourth and sixth nerves and uncontrollable hemorrhage from the base of the skull were all accompaniments of the evulsive removal of the ganglion itself; the sensory root operation entails none of these dangers and may be said to end where the problems of the older operation began, while it is accompanied by an extremely low, almost negligible death rate. Frazier has reported 157 consecutive operations with one death from apoplexy during convalescence. In my own clinic there have been 38 operations and no deaths, making a total of 195 consecutive cases with a mortality of 0.5 per cent.

PROPHYLAXIS OF COMPLICATIONS

As to the permanency of relief there can be no doubt once the sensory root is sectioned. Occasionally various paresthesia are experienced in

the distribution of the nerve. They are transitory, inconsequential and together with the anesthesia are accepted in lieu of the pre-existing pain without complaint. The only real and potentially serious sequel is trophic ulcer of the cornea or, in milder form, trophic interstitial keratitis. That these complications do occasionally arise is true as is also the fact that they are more common following injection of the ganglion and gasserectomy than as a sequel to sensory root division.

With proper prophylaxis, early recognition and appropriate treatment, trophic changes in the cornea either should not occur or if appearing will not result seriously. The eye must be protected by a goggle immediately after the operation, to be worn out of doors for six months. In addition patients are instructed to report frequently to their physician and at once if any blurring of vision should occur. If any haziness or exfoliation of the cornea is found the eye should be closed immediately. Usually, however, the cornea quickly becomes acclimated and after a month the danger of any disturbance is remote. If insufficiently protected during the early period or if the patient is careless, ulceration, corneal perforation and loss of the eye is possible. To my regret this occurred in one of my patients but entirely through her own neglect; she refused to obey instructions or submit to proper treatment, conditions unfortunately beyond the surgeon's control.

Such then and very briefly is our conception of the present status of this very interesting surgical condition the proper relief of which is so satisfactory and so gratifying to both the patient and the surgeon.

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NEW AND NON-OFFICIAL REMEDIES

Silver Arsphenamine.—Sodium Silver Arsphenamine.—The sodium salt of silver-diaminodihydroxy-arseno-benzene, containing approximately 20 per cent. of arsenic and approximately 15 per cent. of silver. The action and uses of silver arsphenamine are essentially those of arsphenamine see New and Nonofficial Remedies, 1921, p. 41). Its claimed advantage over other arsphenamine preparations is said to be due to the silver which improves the chemotherapeutic index. In the presence of organic diseases of the heart, aneurysm, aortitis as well as other parenchymatous diseased conditions of the glandular structures, silver arsphenamine should be used with great caution and in small doses. The dose of silver arsphenamine is from 0.1 to 0.3 gm. for adults. To administer silver arsphenamine the product is dissolved in sterile distilled water without application of heat and without shaking and then diluted with 0.4 per cent. sodium chlorid solution to make 20 c.c. per 0.1 gm. of silver arsphenamine.—(Jour. A. M. A., May 7, 1921, p. 1312.)

Restoration of the Obliterated Eye Socket*

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Editor's Note.—The importance of restoring the obliterated eye socket cannot be doubted for the specialist is besieged by men and women of all classes, after loss of eyes, who wish to wear prostheses for cosmetic reasons, and who will submit to operation after operation in order to be able to carry an artificial eye. The methods so far in use for restoration of the obliterated eye socket have fallen short of being entirely feasible in all cases and satisfactory in results, so out of a large experience in such work in the war, Dr. Wheeler has developed a new operative procedure which, in his hands, has proved less difficult of performance and far more desirable in results than any of the older methods. It is being presented for the especial benefit of eye specialists who so frequently have this problem to meet and solve and it is hoped that they will find Dr. Wheeler's operation as available for their purposes as he has found it.

LOSS of conjunctiva which results in obliteration of the eye socket is caused most commonly by burns, as by molten metal, acids and lime. Less frequently, it is occasioned by traumatism or by improperly performed enucleation of the eyeball. Recently many war wound cases have been operated on for socket obliteration. In dealing with the condition, the cause is of little consequence. The obliteration may be partial or complete, and restoration in all degrees of contraction has been considered a difficult task. The importance of the procedure cannot be doubted, for appearance of the individual, whether woman or man, counts for much. One cannot help being surprised at the insistence of the desire on the part of patients of all classes to wear prostheses after loss of eyes. Commonly a patient will submit to operation after operation for restoration of lost cul de sacs in order to be able to carry an artificial eye.

DESCRIPTION OF OTHER METHODS

In discussing this important subject, let me first refer to some of the methods that have been used or advocated, and then describe a method which I have evolved out of a considerable experience and adopted as the most satisfactory. Just how much is original and just where priority belongs is not of especial interest. The important thing is that by the method which I shall describe, one can permanently restore obliterated eye sockets, without adding any new deformity, and without too tedious an ordeal for either patient or surgeon. The method can be given with confidence because numerous results justify it.

The well known method of Weeks,¹ which calls for a large dermic graft from the inner surface of the arm for each cul de sac, enables the surgeon to give the patient a socket capable of carrying an artificial eye, providing the rather difficult technique is properly carried out. But considerable shrinkage occurs, with accompanying entropion, and many surgeons who have tried the method have been disappointed by almost complete loss of the new socket through undue contraction. The procedure is tedious, especially as

only the upper or lower cul de sac is made at an operation, and, if both upper and lower have to be restored, a period of weeks or months must pass between operations. Moreover, a successful result by the Weeks method is open to the criticisms applicable to all sockets made by the use of true skin—*namely*, that the tissue is too thick for an ideal lining, that the secretions of the glands of the dermis tend to make the socket foul unless the patient is more than ordinarily intelligent and faithful in the care of the socket, and that after transplantation, the skin furnishes hairs which may grow to a surprising length if they are not epilated faithfully. Then, too, there is always the possibility that the arm wound will open up, and that there will be delayed healing.

Many surgeons have used in different ways small epidermic grafts, usually with disappointing results. Recently in war wound work, Gillies² and others have employed the Esser method³ and modifications of this method. The essence of the Esser procedure is the burial of epidermic grafts (raw surface outward) on a form, which later is cut down upon and released through the palpebral fissure after the graft has taken. The important point in the method is to get firm contact between the raw surface of the prepared area and the raw surface of graft. The point is a good one, but certainly there is no necessity for employing such technique in order to get firm contact, and the method is too crude and inexact.

In 1893, Maxwell⁴ in an article entitled "An Operation for the Relief of Symblepharon, or to Enlarge a Contracted Socket so That it May Hold a Glass Eye," described a procedure for carrying a flap of skin from the lower eyelid through the lid substance, and using this skin flap for a lower cul de sac. In 1903,⁵ he published a modification of his operation. In 1918, Schwenk and Posey⁶ advocated the use of the Maxwell operation for restoration of the lower cul de sac, although they said that the lid "evinces a tendency to ectropion" following it. They also recommended the use of a pedunculated flap from the forehead for restoration of the upper cul de sac. Sockets formed by such methods are far from ideal and, manifestly, outward deformities must follow their use. An oculist who recently has been resorting to the

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Maxwell operation writes me, "I regret to say that my personal experience with the Maxwell operation is sufficient to prove to me that it is not practical."

Morax' in an admirable treatise on "Plastic Operations on the Orbital Region," treats the subject of socket restoration in an interesting way. He advocates the use of cutaneous pedicled flaps from the upper eyelid and temple for partial symblepharon and of dermo-epidermic grafts for extensive grafting. He also suggests the combination of the two for total obliteration. In using the detached grafts, Morax employs an elaborate technique, operating in stages. First, he makes his dissection including free canthotomy, and exposes the area to be grafted upon by attaching the upper lid margin to a raw surface just under the brow made by an incision, and by attaching the lower lid margin to a similarly made raw surface in the cheek. He then covers the raw surfaces of the eyelids and fundus of the cavity with dermo-epidermic grafts taken from the arm. About a fortnight later, he liberates the lid margins from the brow and cheek, and brings the lid margins together to adhere over a mould of lead or paraffin. Four to six weeks later, he opens the cavity and puts in an artificial eye. In combination with this method, sometimes he turns in a pedicled flap from the temporal region. In doing all this Morax has made a complex matter out of a relatively simple one, and has unnecessarily lowered his chances of getting a complete take by creating an uneven grafting surface with areas of decidedly varying degrees of resistance to pressure, and so with varying chances of good contact between raw surfaces.

The critical comments which I have made on ingenious schemes and on methods, in some ways admirable, employed by other surgeons are not offered in condemnation, but merely to give reasons for my seeking a technique which will give more nearly ideal results and which will have an appeal for general adoption for restoration of the socket.

THE AUTHOR'S TECHNIQUE

Let us assume a case of complete obliteration of the eye socket.

Preparatory Procedures.—Before grafting for restoration, the surgeon should be sure that there are no pus forming areas in the region. In war wound cases, purulent dacryocystitis and pus pockets from foreign bodies are not rare, and in such cases, excision of the diseased lacrymal sacs or other pus sacs is of importance as a preliminary step. Eyelid deformities may be present and preliminary plastic procedures may be necessary for their repair. I have in mind such injuries as partial or complete loss of hair line at the lid margin, lid lacerations, and also deformities due to unsuccessful attempts at repair of the cul de sacs, particularly by attached flap methods. In all such cases, the lid restoration should be

completed before that of the socket is undertaken.

Anesthesia.—General anesthesia is administered, preferably through a tube, as the surgeon should not be hampered by an ether cone or any form of inhaler which would encroach on the operative field. I have restored the lower cul de sac under novocaine infiltration anesthesia, but have never attempted complete restoration with any form of local anesthesia. I believe, however, that it might be feasible to perform complete restoration under local anesthesia in some cases. The entire procedure should not require more than an hour to an hour and one-half.

Instruments.—Small scalpel, mouse tooth forceps, multiple tooth forceps, anatomical forceps for sponging, straight and curved scissors, lid everter (such as Ehrhardt's), three or four fine artery forceps, lid retractors and strabismus hooks, skin graft razors, a teasing needle and dental impression compound. A needle holder and 00 or 000 plain gut ligatures may be used in the preparation of the orbital bed.

Preparation of Patient.—Robust physical condition is desirable for a complete take of the graft and for prompt healing with a minimum of granulation tissue formation under the graft. Any constitutional ailment should be combatted, and the physical condition of the patient should be built up. For several days in advance, the field of operation should be kept clean by boric acid bathing and if there is any blepharitis, this should be corrected by a suitable ointment (yellow oxide 1 per cent. or bichloride 1-3000) and massage. If the operator chooses, the thigh area from which the graft is to be taken may be prepared in advance by shaving, rubbing with alcohol and ether or with benzene or gasoline, and applying a sterile dressing. Usually I do not give the skin area any advance preparation, and after the patient is under anesthesia, have it shaved and thoroughly rubbed with gauze soaked in alcohol and ether and then cleansed off with sterile salt solution. I have used tincture of iodine on the skin, but its use is not necessary and I have abandoned it. The lids and any remains of conjunctiva should be wiped free of any secretions, and tincture of iodine be applied thoroughly to the entire operative field.

PREPARATION OF BED TO RECEIVE GRAFT

An incision is made to separate the lid margins if they are adherent, and then the dissection is carried in such a way as to separate the lids from the orbital contents. A free canthotomy is made extending from the outer canthus to the outer orbital margin. The idea in making such an extensive canthotomy is to enable the surgeon to introduce a large form so that the whole socket may be restored at one operation. If only the upper or the lower cul de sac has to be restored, a short canthal incision is sufficient and in some cases, none at all is needed. In lifting the eyelids from the orbital contents and making

the socket which is to be lined with skin, several important points should be borne in mind.

First: The Plane of Dissection.—The dissection must be kept superficial, so that in front of the dissecting knife or scissors, there is only lid tissue—that is only skin, orbicularis and the thin fascia of the lid, and tarsus. It is not even necessary to save the tarso-orbital fascia with the lid. Probably one of the most common causes of failure is for the surgeon to carry the dissection back into the orbital tissue. The sense of touch helps out in this part of the operation. By external palpation, the scissors can be felt through the thin lid and can be kept working accurately. After cutting the eyelids from the underlying tissues, I evert them with the Ehrhardt lid everter and carefully trim away anything adhering to the thin layer of fascia which lines the orbicularis. This leaves a thin but well vascularized lid layer with a smooth and favorable area to receive the lining graft of epidermis.

Second: The Extent of Dissection.—Not only the superficial plane of the dissection, but the extent and limitations of the dissection are important. Temporarily and below, it should be carried well to the orbital margin and even 1 m.m. or 2 m.m. beyond, as we wish the graft to adhere to the periosteum of the anterior aspect of the orbital margin. On the nasal side, the dissection should be to the anterior crest of the lachrymal groove and to the orbital margin above it. A point of caution is in order here. The internal canthal ligament holds the lids at and near the canthus so unyieldingly in position that, in attempting to carry the superficial dissection behind them, there is danger of cutting through one of the lids near the canthus. Both vision and palpation should be employed to avoid this accident. Should it happen, the wound can be closed by skin sutures, after the graft has been placed. A point of refinement in dissecting at the inner canthus is to save the caruncle if it has not already been destroyed. The graft will adhere to the posterior surface of the caruncle and give it a permanent lining. Temporarily and below, the division of tissues is made to the orbital margin, and nasally, to the lachrymal crest; but in the division of the tissues above, the dissection is carried behind the orbital rim and not necessarily to the roof of the orbit. It is not always necessary to destroy the levator palpebrae. If the grafted skin is attached to the periosteum below and laterally, it is sufficiently anchored, and slung across from nasal to temporal margin, at it were. It is not necessary to have a deep cul de sac above. It is important that it be deep below, so that no support for the prosthesis will have to come from the lower lid. At the sides, the socket should extend well beyond the canthi, for if any part of the edge of the artificial eye shows, the appearance of a globe is gone, and with it the illusion.

Third: Preparing Field.—In preparing the bed for the graft, all cicatricial and granulation tis-

sue should be removed. Excision of granulation tissue is especially urgent, as its contraction may result in contraction of the socket. Many sockets have suffered on account of failure in this regard. Reduction in size of the newly made socket is not due to contraction of the skin itself, but to that of underlying tissue.

Fourth: Thinning and Trimming of Tarsus.—A common fault that manifests itself after restoration of the socket is that of too much thickness of the lid margin. If to the outside skin, orbicularis and tarsus are added the skin graft and the inevitable thin layer of connective tissue underlying the graft, the lid at the margin is bound to be too thick and it will stand out as a cosmetic blemish. This deformity can be obviated by cutting away tarsus. If the skin graft must extend completely to the margin of the eyelid, the tarsus can be split and thinned. If the graft is to extend nearly to the margin, enough tarsal plate can be put away so that the graft will set in as an inlay. In any case, enough tarsus should be left to support the cilia, but not necessarily any more. For a finished result this fourth point is essential.

In all this preparation of the socket for the reception of the graft, no undue traumatism is to be offered. Spurting vessels can be caught up with fine artery clamps, but no ties should be applied. The tissues should not be macerated in any way. I avoid using a tissue forceps in carrying on the preparatory dissection—merely a knife and a sturdy thin-bladed scissors curved on the flat, and carry out the process in as clean-cut a manner as possible, giving a minimum amount of trauma in order to leave the vitality of the tissues at as high a pitch as possible. If there is a cleft anywhere in the fundus of the socket due to the removal of scar tissue, it may be closed by the use of buried fine cat gut ligatures. On no account should suture material be exposed so as to come in contact with the graft after it has been introduced. During the dissection, there is bound to be considerable bleeding and the assistant can be of great help by skillful sponging with gauze strips and anatomical forceps, using firm pressure in the act, but not rubbing the exposed tissues.

Removal of any tags, free or attached, and irrigation with luke warm normal salt solution or boric acid complete the preparation. No hot solution or strong antiseptic should be used, for fear of lowering the vitality of the tissue cells. After the cavity is ready, do not pack it. Simply put a damp pad over the lids and apply pressure if there is any oozing.

THE FORM TO HOLD THE EPIDERMIC GRAFT

A form is now moulded to fit the cavity. Dental impression compound is ideal for the purpose. (I have found "Kerr's Perfection Impression Compound" satisfactory. It can be obtained from any dental supply house.) Sterilization of the

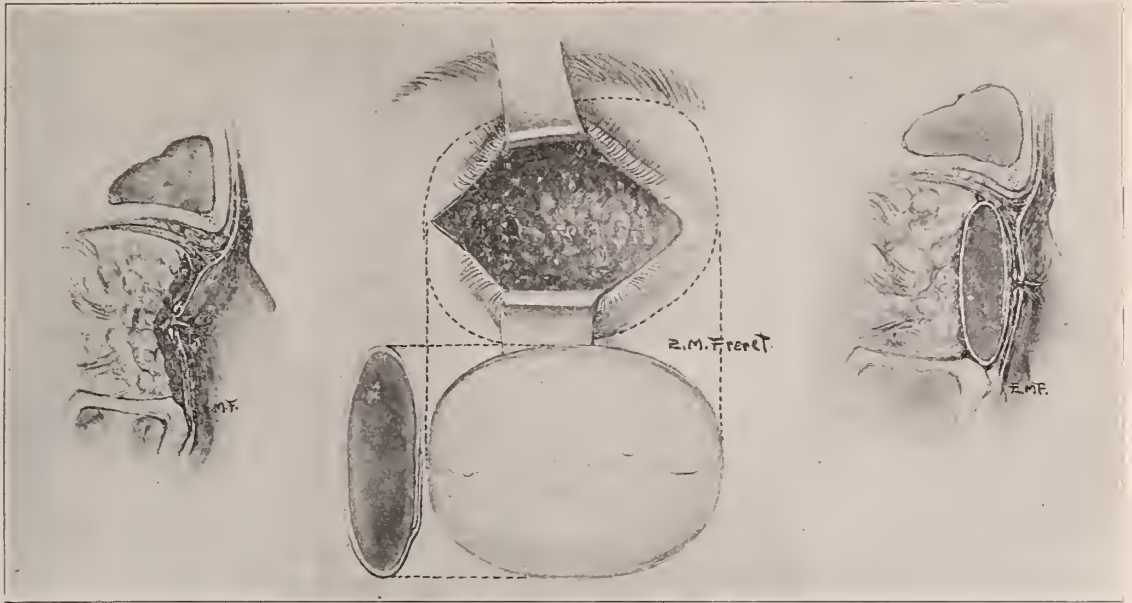


Fig. 1. Cross section through orbit and eyelids to show dissected cavity between eyelids and orbital contents for new socket.

Fig. 2. Dissection completed. Eyelids retracted to show bed for reception of graft. Orbital margin indicated by curved dotted line. Below—Cross section, and front view of form, completely covered by epidermic graft, ready for introduction to the prepared cavity.

Fig. 3. Cross section showing epidermic-covered form, placed for lining of new socket.

compound can be accomplished by baking it, or by putting it in a porcelain dish and placing the dish in boiling water, there to remain for 15 or 20 minutes. The moulding process is best accomplished by holding the plastic compound in warm water and working it into the desired size and shape with the fingers. Ordinarily for full restoration of the socket, the dimensions are approximately as follows: Length 40 to 45 mm., width 30 mm., thickness 4 or 5 mm. The entire surface of the form should be smooth and free from cracks. After the moulding process is finished, drop it in cool or cold water or salt solution to set it. If you do not get it right in size and shape, you can put it back into the hot water again and make corrections and then set it again in cool water and leave on a towel or tray until the graft is ready.

TAKING THE SKIN GRAFT

The ideal graft for socket restoration is one without perforations, and made up of epidermis only, free from layers of true skin, and large enough to be wrapped around the form of impression compound with generous overlapping. This means a graft of 3 to 3½ inches long and 2½ to 3 inches wide. I am not content with patches or scraps of skin for this purpose, and I do not allow myself the liberty of cutting into the dermis, although to do so is much easier than not. To carry true skin along with the graft means delayed healing and scarring of the area from which the skin is taken, and it means a less tractable graft for wrapping nicely about the

form. It also means undesirable and unnecessary thickness of the socket lining, with decreased pliability, and, moreover, the possibility of oily secretion which becomes rancid, and hairs which have to be pulled. I say this with the knowledge that Morax and others recommend dermo-epidermic grafts for the purpose.

The razor should have a larger blade than is usual for a shaving razor. Otherwise the design is unimportant. The Dench model is satisfactory. But the cutting edge must be keen to a fault throughout its entire length. I have gotten better razor edges from barbers who would take an interest than from instrument makers. It is well to have at least two razors so that if one is found faulty, you can have another chance.

The upper, outer aspect of the thigh is the best place from which to get a large epidermic graft. This is shaved, cleansed and draped. Then a very little sterile vaseline is rubbed on the skin, so that the razor blade will not stick to the skin at the edges of the graft as it is being taken. An assistant, with a towel or gauze over the skin to prevent slipping, by using the edge of his hand, holds the thigh skin taut and flattens out the surface. The operator with one hand controls the skin surface, and with the other carefully shaves off the single large graft of epidermis (2½ to 3 inches by 3 to 3½ inches), taking care not to perforate or not to go too deep. With the hand, the skin surface can be so controlled that it can be depressed or elevated at different points as the need may be.

The graft of epidermis is immediately wrapped

about the form of impression compound, raw surface outward and overlapped on the surface which is to be anterior. If the graft has no true skin, and if there is the slightest amount of vaseline on either the skin or the impression compound, it will cling closely to the form. In placing the graft on the form, I should use only the fingers and a fine teasing needle, and not grasp it with a forceps. The form, completely covered with epidermis, is forced into the socket cavity; and it is not necessary to remove small blood clots before placing it, as they will not prevent a take. The overlapping portion of the graft is placed forward so that if through manipulation the edges are disturbed, they can be carefully replaced through the palpebral fissure in such a way that every part of the form will be covered. No sutures are used. Formerly I stitched together the lid margins, but found that nothing was gained by this step, so abandoned it.

DRESSING AND AFTER CARE

In placing the gauze, it is well to put strips both above and below the palpebral fissure so as to make sure by control of the pressure that the edges of the lids are not turned in. Then gauze fluff is packed on, and a gauze patch is put over this, and adhesive strips are used to make firm pressure. A pressure bandage is applied, and over this adhesive strips again. Very firm pressure is important, to secure accurate contact at all points and to keep the cavity absolutely obliterated. This first pressure dressing is left in place for a week. When removed, it is bound to be soaked with blood and secretions and there is an odor from the sloughing of the overlapped skin graft. But if pressure has been sufficient, very little reaction of the tissues will manifest itself. I should not even separate the lid margins at the first dressing, but merely bathe off the lids carefully with cotton sponges damp with boric acid solution.

After the first dressing has been removed, extreme pressure is not necessary, but the dressings should be snug. They may be changed every day or every other day as comfort may dictate. Irrigation is not necessary and disturbance of the form is to be avoided. This is to be left alone for three (3) weeks or approximately that, and then it should be removed and not inserted again. The operator may choose to give the patient a whiff of gas for the removal of the form, as the tissues are rather tender by the end of a 3 weeks' period. Usually I employ cocaine instillation for anesthesia. The form can be caught by a hook and usually can be carried out of the new socket without breaking. After taking out the form the socket is cleansed with boric acid solution and anointed with vaseline. It may be kept packed with plain or iodoform gauze for a few days. There is no objection to leaving the new skinned socket empty for an indefinite period. A mistaken idea is that the socket will be lost if an

artificial eye or some form of dilator is not promptly introduced. I like to wait a week or more before putting in the prothesis, and it is permissible to wait any length of time. The cavity should be completely carpeted with skin. If there is a little break anywhere, a granulation may appear and have to be snipped off. After a few weeks, a little lachrymal fistula may form and lachrymal secretion may persist in small quantity. This is rather an advantage, in keeping the artificial eye slightly moist.

RE-ADJUSTMENT FOR PALPEBRAL FISSURE

Sometimes the lid margins do not grow together sufficiently following the canthotomy, and the palpebral fissure may be too long. If such is the case, the fissure should be shortened by cutting away the epithelium of both upper and lower margins for the desired amount of shortening, splitting the lids and sewing together the two posterior flaps with knots behind, and then sewing together the two anterior flaps. In this way, one can accurately graduate the shortening so that the palpebral fissure of the two sides will match in length.

Care of the denuded area in the thigh is very simple. Usually the graft has to be trimmed a little and any trimmings can be used to advantage by sticking them back on the denuded area so as to make islands from which epithelium will grow, and thus the time of the epithelization process is shortened. Either rubber tissue or vaseline gauze makes a suitable covering for the raw surface. Dry gauze is secured over it by adhesive strips and left for about two weeks, when the dressing can be taken off and left off.

If the surgeon has been successful, in carrying out this technique, he will have a permanent socket, extending well beyond the canthi and of sufficient dimensions all around. The lids will be normally thin and pliable and the thin-walled socket will not prohibit mobility of the stump and artificial eye, although the movements of the eye will be less than following ordinary enucleation.

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Importance of Goitre Being Recognized by the General Public*

Willard Bartlett, A.M., M.D., F.A.C.S., St. Louis

Editor's Note.—In view of the fact that Ohio boasts of several of the largest goitre districts in the country it is not surprising that Dr. Bartlett considers goitre a matter for general concern, especially as in succeeding generations it results in such a distressing complication as cretinism and its associated dwarfism and deaf-mutism. As the prophylaxis of endemic goitre is perfectly feasible there would seem to be no reason why communities should not be apprised of this fact and prophylaxis instituted as a general public health policy. There is no longer any doubt that simple goitre may be transformed into the toxic variety and hence it is also important for the community to realize that goitre is amenable both to therapy and proper surgery. It is only by informing the public of these facts that permanent benefit can result to future generations. Has this problem been attended to in your community? If not Dr. Bartlett's paper will set you to thinking about its solution.

IT SEEMS to me in choosing a subject that one may on an occasion like this, with propriety, voice a warning which is suggested by the prevalence to an unusual degree of a certain malady in this community.

It is a fundamental law of nature, fortunately, that menacing conditions wherever they obtain, should stimulate in certain leaders the ability to combat them if the people are to develop along approved lines, or are indeed, to continue to exist. So it comes about that all those who today are interested in the subject of goitre, no matter in what part of the world, should turn toward Ohio and acknowledge their indebtedness to the investigations of Marine, the surgical advances of Crile, and the collaborations of Crotti.

It surely looks like carrying coals to Newcastle for any stranger to exhibit his temerity by speaking on goitre in this presence, still, one might be justified if he did no more than voice his indebtedness to these Ohio pioneers in the goitre field, where the Biblical injunction of "the prophet in his own country" seems to have gone amiss.

The Great Lakes goitre basin, with Ohio in its center, is too well known to merit more than passing mention among the other similarly affected areas, which are scattered all over the globe, most of them being high plateaus or mountainous districts.

The prevalence of the malady is apparent when one remembers that Marine found goitres in more than one-fourth of the young school girls of Akron, in whom nothing had been done to prevent it; the same author has stated that ninety per cent. of the street dogs in Cleveland have goitres, which reminds us in no uncertain way that not only the human inhabitants, but practically all the lower animals are affected as well in a goitrous district. The nearer we approach Lake Erie, no matter from what direction, the more frequently the disease is encountered, until, as Adami found, there is at least one goitre in practically every family in certain of the towns across the lake from you. Dock went so far as to say that he found 10 per cent. of goitres among the

young women in many of the French-Canadian villages.

THE NORMAL AND ABNORMAL THYROID

Possibly then, in view of what has just been said, it may not be devoid of interest for us to discuss somewhat at length the normal purposes of the thyroid gland, as well as the conditions under which it increases its size. Crotti tells us in his recent book many of the interesting early theories regarding the use of the gland, one of which was supposed to be to give a soft roundness to the neck, which seems at least to have been thought true of Louise of Prussia, with the scarf always charmingly draped about her throat. However, all the old time theories about the thyroid may be regarded as obsolete, excepting those which relate to the regulation of our metabolic processes. This little gland, consisting of two tiny, flattened lobes, just below the Adam's apple at either side of the windpipe, presides over nutrition, growth, the distribution of the blood, and certain functions of the nervous system. It is wholly indispensable, is most important in earliest life, but gradually loses its value as the vital fires begin to smolder, and we slowly cool down toward the natural end of life. Our vivacity, personal magnetism, and joy of living are all proportionate to the amount and activity of our thyroid glands.

We must not regard every transient enlargement of it as a mark of disease, since there are periods of stress, like those of puberty, pregnancy, and the menopause, when nature makes extra secretory demands on this little structure, thus necessitating a temporary enlargement of it in order that its function may be properly performed.

Goitre, by which we mean the enlargement of this gland, well beyond the physiologic limit, was well known three thousand years ago, and no doubt existed from the earliest times. It may be roughly divided into two kinds, the *simple goitre* which may become a menace, because it exerts undue pressure upon the delicate and important structures of the neck, or may render the individual conspicuous and unhappy on account of its appearance alone. The second form of goitre is

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the so-called *toxic variety*. The manifestations here are not confined to the neck alone, but affect the heart, the nervous system, causing the eyes in many instances to bulge, and producing at times damage to almost all of the important organs. We may then in this connection, ask ourselves what the real dangers of goitre are, and reflect in the light of experience, that any goitre may attain such proportion as to exert undue pressure on surrounding structures, or indeed, may in the course of years, develop the symptoms of the toxic, systemic variety. This latter assertion is proved by the fact that many of our seriously sick goitre patients give a history of the tumor having long antedated the general symptoms, for the relief of which the patient comes to us.

IMPORTANCE OF ENDEMIC GOITRE AND ITS CURATIVE FACTORS

In concerning ourselves with the cause of goitre we must admit in the presence of an immense amount of knowledge which has been accumulated in explanation of it, that we have by no means exhausted the possibilities. Especially is this true of the simple goitre, which occurs sporadically in what is known as a goitre-free district. But fortunately, this form is of relatively little importance when compared with the *endemic variety*, which constitutes a distinct menace to the well being of the people of your state.

Dr. Lager states that forty-two causes have been advanced to explain the occurrence of it, and I believe we are safe in assuming that no one of them accounts for many of the cases. However, it would seem when all the evidence is weighed that (1) an iodine deficiency, (2) contagion, or (3) polluted drinking water, one or more of them in combination, go very far toward explaining endemic outbreaks of this kind. Generally speaking, goitre is comparatively infrequent along the sea coast, where iodine as a constituent of sea water is found in great abundance. On the other hand, the disease is more prevalent in mountainous regions than anywhere else. Then too, the experiments of Marine, who prevented goitre in thousands of school children by the use of iodine, would go far toward showing that the disease is in very many instances merely an expression of an iodine deficiency. This argument is, however, not so wholly satisfactory, when one endeavors to answer C. H. Mayo's question, why if iodine deficiency is the cause, are there not as many goitres in men as in women?

The second theory urged in the explanation of endemic goitre is that it is a water born disease, and this is in many instances proved by the fact that a change of water supply has sufficed to eradicate it. Bircher writes that the incidence of goitre in school children dropped from 59 per cent. to 2.5 per cent. within the first twenty-two years after non-goitrous water was introduced into a certain goitre district of Switzerland.

From very earliest times, for example, in the writings of Pliny, goitre wells have been mentioned, and it was a favorite ruse of the army recruits abroad of a hundred years ago to escape military service by drinking from known goitre wells and thus acquiring the disease. Experiments too numerous to mention have been made in the direction of preventing goitre by boiling water, by letting the water stand until the evanescent poisons disappeared, by changing those affected from a spring to a cistern for their water supply, and in all of these ways proving the point at issue.

We have, however, never been able to determine just what it is in drinking water that caused the disease. Many of the older authorities thought that the water of certain geologic formations became impregnated with salts derived from the rocks through which it ran, and in consequence, carried an inorganic poison to the victim. While certain arguments tend to show that this is true, still there are many more highly important reasons for believing today that it is an organic and likely a bacterial poison which is disseminated by the water we drink, and thus accounts for the prevalence of goitre in the basin of the Great Lakes.

Contagion as a third factor must not be entirely lost sight of in view of the fact that many well authenticated epidemics have taken place in boarding schools, barracks and similar institutions, where highly unsanitary conditions prevailed, and the point is further proved by the fact that abolition of the conditions thought to cause the outbreak, speedily resulted in the disappearance of it.

The factor of infection holds true for the individual case no less than in the epidemic form of the disease, and it seems to me that this cannot be too strongly impressed upon patients and physicians alike. We have in our clinic been so deeply impressed by the fact that a large number of our systemically sick goitre patients present bad teeth, tonsils or both, that we now reason *a posteriori* and examine for goitre in every patient who presents bad teeth and tonsils. Our colleagues, the dentists, have been perhaps not wholly blameless in this connection, since in their zeal to save the teeth they have, I am sure, in some instances done so at the risk of sacrificing the patient.

THE COMMUNITY RESULTS OF ENDEMIC GOITRE

The prevalence of endemic goitre in Ohio is a matter vastly more important to the community than may be realized by the laity, or even by many members of the medical profession. The cumulative effect of the causal poison, whatever it may be, expresses itself through succeeding generations, to the end that goitre in one generation may be followed by myxoedema in the next, and cretinism in the third, in other words, we may see a spontaneous development in the course

of three generations of a condition similar to that which ensues if a child be born without a thyroid, or has it destroyed by operation or disease early in life.

This cretinism is known to most of us as a condition of both mental and physical dwarfism, with deaf-mutism, and other complications. No words can describe, nor the most fertile imagination conceive of more pitiable objects than cretins, these idiot "man-plants," which like the lower animals are capable of just a little training, which elevates them to the stage of imbecile "man-animals." Fortunately, cretinism has followed goitre with relatively less frequency in America than in Europe and Asia, but still, this may not always remain true, since we know that the severity of endemic goitre undergoes profound changes and hence no false security is to be taken for granted. We have already a sufficient warning in Crotti's statement that there are now 15,000 feeble-minded children in Ohio; of course, there are reasons other than goitre for idiocy and deaf-mutism, but they are of slight value in comparison with it, hence it is safe to assume that a large majority of these 15,000 represent the terminal phase of endemic goitre in their ancestors. This disease has played a profound role in the economic life of other nations, of which many an example is recorded in history; it suffices perhaps, to remind you that the Swiss army is reduced by one-sixth in consequence of this disease alone. When one considers that more females than males of the same age are affected, the *real* economic meaning of this malady for Switzerland alone is apparent to the most casual observer.

CONTROL AND TREATMENT OF ENDEMIC GOITRE

The treatment of endemic goitre begins of course, with prophylaxis, and this state may be well proud of the fact that Marine and his co-workers have done more than any other investigators in preventing it; I refer, of course, to the experiment on the Akron schools girls, referred to early in this discussion. Unfortunately, the iodine, which Marine used so successfully in the very young, cannot be employed after forty, without the risk of transforming a simple goitre into one of the toxic variety. It is for the same reason especially unsafe when once a systemic form of the disease has been established. But suppose an epidemic is traceable to drinking water, then the proper line of reasoning becomes especially plain. We have to send these individuals into a non-goitrous district, or what is vastly simpler, bring uncontaminated water to them, or still better, boil or in some other way disinfect the water they are obliged to use. Early in the disease these simple means suffice for the cure of many patients. This is, however, not true after degenerative changes in the gland have taken place. However, the goitrous, prospective mother, where this is possible, may carry her child and bear it

in a region that is not affected, bringing a healthy infant into the world; so, it may be seen that there are many comparatively simple measures which may be undertaken in the hope of obviating the dreaded hereditary, cumulative late effects of the goitre malady.

As Clevelanders you know that you have in your midst a goitre clinic, to which the surgical world points as the last word in the development of an operative treatment which has been one thousand years in developing to its present standard of excellence. I need perhaps no more than mention the fact that we now remove without risk or ill after effects the simple goitres which is unsightly, or which mechanically interferes with important organs. The laity may not know that it is very much more of a problem to treat successfully by operative means the toxic goitres, but we are now able, since we have learned by experience, to judge accurately the very slender margin of safety possessed by these individuals, to remove their thyroids with the highest degree of satisfaction.

I have not been able in the short time at my disposal to do more than merely indicate in the most superficial way the salient features of the goitre problem, especially the endemic form as it affects Ohio, and the vicinity of the Great Lakes. Still, if we may be permitted to reason by analogy, we cannot, I believe, escape the conclusion that the dire consequence of neglected endemic goitre, viz.: myxoedema and cretinism, would constitute a very real menace to the health, if not the life of a quite considerable portion of this highly prosperous and enlightened community.

METROPOLITAN BLDG.

Books Received

Operative Surgery, for students and practitioners, by John J. McGrath, M.D., F.A.C.S., Professor of Surgery, Fordham University; Consulting Surgeon of the Peoples Hospital; Visiting Surgeon to the Fordham, Columbus and New York Foundling Hospitals; Fellow of the American College of Surgeons; Fellow of the New York Academy of Medicine; Member of the American Medical Association. Sixth Revised Edition. With 369 illustrations, including full-page color and half-tone. Price \$8.00 net. F. A. Davis Company, Publishers, Philadelphia.

Practical Chemical Analysis of Blood, a book designed as a brief survey of this subject for physicians' and laboratory workers, by Victor Caryl Myers, M.A., Ph.D., professor of pathological chemistry in the New York Post-Graduate Medical School and Hospital. Illustrated. C. V. Mosby Company, St. Louis. Price, \$3.00.

Tuberculosis and How to Combat It. A book for the patient. By Francis M. Pottenger, A.M., M.D., LL.D., F.A.C.P., Monrovia, California. Price \$2.00. C. V. Mosby Company, 801 Metropolitan Bldg., St. Louis, Mo.

Treatment of Addiction Disease*

Frank Burns, M.D., Cincinnati

Federal Physician for the Southern District of Ohio

Editor's Note.—As explained by Dr. Burns the theory on which the lipoidal treatment of addiction disease is based, is as follows: The action of alkaloids upon various tissues and their constituents shows that they all have a dissolving action on lipoidal contents and vitamins. The lipoids have a similar activity toward such toxins of low nitrogenous content as are released during the use of narcotics. Addiction is caused by the absence or continued loss of lipoids in the system and is exaggerated by the non-elimination of toxins. The hypodermic administration of lipoidal substances is without by-effects and such treatment gives clinical cures without the usual distressing symptoms of withdrawal. Cured patients develop a well defined contempt toward alkaloids, but patients with pathological changes not due to narcotics return to their use.

AS Federal physician for the southern district of Ohio, I have devoted a great deal of time to the medical handling of drug addiction disease patients, arrested in the southern district of Ohio by narcotic officials. This work has been done by me since holding the present position, carried on in my general medical supervision, without special isolation and without a special nursing staff. I have had facilities for desirable and exhaustive investigation and findings in these cases. The large proportion of drug users among the inmates of this institution makes the work of vital importance. The passage of anti-narcotic legislation has still further increased the drug using population, and added to the administrative work in dealing with the problem.

GENERAL CONSIDERATIONS

It is difficult for most of those who have not had competent experience with this disease and who have not made careful clinical study of it to appreciate that a procedure which will completely relieve one patient will not have the same result with another, and the patient is not necessarily well when he has been through treatment, but is only fit to be pronounced well when the physical manifestations of his disease have disappeared and when he is in functional readjustment and normal balance.

It is to be noted that in the cases I am called upon to treat the patients for the most part are inherently defective and fundamentally below par in mental, moral and physical make up. I have probably a larger proportion of this class in my cases than exists among those treated in general hospitals and private institutions. It is, therefore, foolish, misleading and dangerous to speculate upon the percentage of cures among such cases.

I believe from observation among the better class of addicts that the great majority would gladly abandon their habit and be free from the agonies attending such addiction if it were made widely possible for them by treatment which did not force them to the endurance of great suffering and was not followed by a protracted period of discomfort and physical incapacity. But I do not plan to make this report in any way an exposition of medical quibble nor to burden it with medical details. Narcotic drug addiction is a physical condition in which continued adminis-

tration of narcotic alkaloid, from whatever cause or origin and in whatever type or class or individual, has set up within the body a mechanism of protection against the toxic action of narcotic drugs.

ADDICTION AS A DISEASE PROBLEM

The addiction disease problem is now fast coming to be recognized as fundamentally a disease problem for whose basic solution we must look to clinical and experimental medical laboratories for our guide. It has associated with it many problems not of medicine, problems which are in part incidental and in part intrinsic, and which call for in such cases as they complicate the medical picture, custodial, correctional, penal or other handling. Laws and their enforcement in the control of the incorrigible and vicious will always be a necessity, but laws and their administration alone are not sufficient for the control of the many sided addiction situation. A large number of citizens who are individually and personally social and economic assets and who are sufferers from addiction disease should be an important consideration in the narcotic problem. Ignorance of the facts of addiction disease has taken from these people even their ordinary legal public rights in any issue which involved the possible revelation which might reveal their narcotic medication, and would expose them to public gaze as members of a popularly despised and unworthy class of individuals.

Some addicts, as individuals and types, will of course always require institutional and custodial handling. The handling of the addict who is criminal or vicious belongs within the province of the penalogical authorities, just as does the handling of any other man who is criminal or vicious. The handling of the addict who is fundamentally degenerate, defective or mentally weak would require the attention of the alienist and institutional restraint, just as may the handling of any other man who is degenerate or defective. But narcotic drug addiction disease in the man who is vicious or criminal or defective or degenerate should be treated as narcotic drug addiction disease, as any other disease is treated in the same individual.

The one important point to be kept in mind is that narcotic addicts are sick; sick of a definite and now demonstrable disease, as outlined by the work and research of Horovitz, Bishop, and

others. This disease is variously complicated and widely variable as it occurs in the individual patient. Although some individuals afflicted with this disease may require custodial or correctional handling, the fundamental physical disease cannot be properly arrested nor handled successfully by mental, moral, sociological or penalogical methods only. Any toxic, worried, fear ridden or suffering sick person may show psychiatric manifestations or complications, but observing and attempting to control complications only

special routine treatment, and the search for specifics and panaceas, and aiming at, and devoting great effort to searching out, considering and treating the fundamental cause underlying the condition, as has been done through the research of Horovitz, whose preparation I have tested in my work of addiction disease.

Horovitz's lipoidal substances and their action are familiar to most men treating this disease. *The action of alkaloids upon various tissues and their constituents brought out the conclusion that*

CASES OF ADDICTION DISEASE TREATED WITH LIPOIDAL SUBSTANCE
Cases taken promiscuously—not selected.

No.	Name	Age in years	Duration of disease, years	Grains of opiate used daily	Number of days of treatment	Final Results	Remarks
1	G. H.	28	5	25	45	Improved	Had received five other treatments prior to present.
3	M. B.	25	4	10	20	Greatly improved	Gained rapidly in weight.
7	H. H.	26	10	35	40	Greatly improved	Patient had tried all other treatments and pronounced this one the best.
11	S. C.	45	15	10	30	Improved	Patient recommended for treatment.
12	B. C.	38	3	5	25	Improved	Resumed his position as vaudeville performer.
17	T. McG.	23	3	15	22	Improved	Expiration of sentence before treatment finished.
21	W. P.	21	2	5	9	Fair	Gained forty pounds in forty-five days.
23	F. B.	26	7	30	45	Excellent	Left before treatment was finished.
27	P. G.	26	6	10	30	Fair	Did not improve in weight.
28	S. G.	24	5	10	30	Improved	First treatment ten days. Out on bond to take other treatment in sanatorium. Came back again, saying he preferred this treatment.
30	H. A.	25	5	10	12	Unimproved	States he would take ten years and not quit his habit. Refused further treatment.
35	W. F.	45	12	20	20	Slightly improved	Says he is a man now and intends to stay a man.
42	D. G.	29	11	30	30	Unimproved	Asked for treatment as prophylactic.
45	G. R.	44	20	25	10 & 20	Unimproved	
47	O. De A.	50	18	40-50	5	No results	
50	J. H.	27	6	10	22	Improved	
55	R. C. (alias Frisco)	43	13	20	24	Excellent	
57	Wm. B.	25	12	30	22	Improved	
60	J. B.	24	5	5	20	Fair	
61	O. N.	26	10	20	30	Improved	
87	C. C. F.	41	5	15	14		Still under treatment.
88	W. Sch.	29	9	12	14		Still under treatment.
89	F. G. (M. D.)	36	18	30	14		Still under treatment.
90	C. A. W.	21	3	2	3		Still under treatment.
91	C. P.	29	8	15	4		Still under treatment.
92	J. K.	28	7	25	3		Still under treatment.
93	J. F. K.	34	3	14	14		Still under treatment.

NOTE.—In each case one c.c. of the lipoidal substance was given daily.

will not cure basic disease. There are many patients, as previously stated, in whom addiction disease is in no way associated with vice, or other morbidity of mental or environmental origin, who are merely sick people suffering from addiction disease, whose problem is control of that disease until it can be arrested by competent therapeutic procedure, for which they constantly seek.

LIPOIDAL SUBSTANCES IN THE TREATMENT
OF ADDICTION

Our stumbling block in the past has been that our minds have been focused too much upon the mere use of narcotics and upon the stopping of the use of the drug and too little upon the individual we were treating and the mechanism of his disease. We have tended to apply our remedial effort to narcotic use instead of narcotic drug addiction disease. There has been of late, however, signs of change in the situation, and in this change lies one of the greatest hopes of the solution of the narcotic drug problem. The attitude toward addiction is beginning to follow the trend of modern medicine in getting away from

various alkaloids have a different influence upon various tissues and their components, and all have a dissolving action upon the lipoidal contents of the various tissues, that the vitamines contents of the tissues have the duty to protect their environment against the destructive actions of toxins of low nitrogenous content. The lipoids of certain tissues have a similar activity toward toxins of similar nitrogenous content, like the toxins released during the use of narcotics. During the period of taking opiates the lipoidal content of the tissues of the nervous system is greatly reduced, causing changes of such a nature as to produce a desire for narcotics. Horovitz, realizing that addiction is caused by the absence of lipoids in the system, endeavored to find means by which it is possible to replace the lost lipoids of the system of patients suffering from drug addiction disease. Furthermore, he realized that in this type of cases the system is saturated with various forms of toxins, and the neutralization and elimination of these toxins was of imperative importance.

CASES HANDLED

My series of cases include both male and female patients of this type, of these eighty-four were male and nine female, a total of ninety-three. The duration of the disease is noted in the accompanying chart of the cases, and likewise the daily amount of drug used. We did not have the opportunity of rating these cases as to endocrine changes nor the heart, pulse and other reactions, but only on the clinical manifestations.

Most all of these patients improved in appetite and general physical condition, gained in weight, and did not complain of usual manifestations after fourth or fifth day. As to whether or not they would return to their habits upon return to their former environment would be hard for me to state, as this depends upon moral environment and association. A statement was made by some that they would like to verify their cure, but were warned not to attempt such a hazard.

CONCLUSIONS

1. Lipoidal substances gradually reduce the craving.
2. During the treatment with lipoidal substances the patient does not suffer the tortures experienced during the reduction treatment.
3. All the by-symptoms of drug addiction disease (respiration, heart action, constipation) are rendered normal during the treatment with lipoidal substance.
4. In patients once clinically recovered under the influence of lipoidal substance there develops a well defined contempt toward alkaloids.
5. Patients with pathological changes not due to the influence of alkaloids will go back to the use of narcotics.
6. Patients who suffer solely from the ill effects of alkaloids will remain normal, once the treatment comes to a successful conclusion.
7. Lipoidal substance is administered hypodermically with no ill effects whatever.

2257 VINE STREET.

Version*

Irving W. Potter, M.D., F.A.C.S., Buffalo, N. Y.

Editor's Note.—When an obstetrician delivers 920 women by version in one year he is certainly entitled to speak and write on the subject, at least from the standpoint of his experiences and results. However, in addition to this Dr. Potter has added much to the scientific phases of performing version, for even such an authority as our own Dr. Zinke candidly admits that Dr. Potter has shown him a new and improved obstetrical maneuver. It is fortunate for the profession that Dr. Potter has greatly interested himself in demonstrating his method so that it may be more widely adopted by those in whose hands it will materially advance the art of obstetrics, and especially help to reduce maternal morbidity and mortality. Dr. Potter's results, so far as his mothers are concerned, really make a remarkable world's record and while his infant mortality is not as negligible, it is as low as could be expected considering the variety and frequency of complications encountered in conducting the birth of 1113 babies in one year. Dr. Potter's method has achieved acceptance in the face of the most bitter criticism and it is presented herewith to stimulate further discussion, so that its value may be all the more absolutely determined.

IN addressing you upon the subject of version this evening, I assume that I am speaking to men who have been specially trained and are experienced obstetricians, and, therefore, if I am bold enough to criticise present day teaching, it is because I have found nothing that would assuage and alleviate the pains and the agonies of the second stage of labor which, to my mind, is the desired aim of modern midwifery. The abdominal surgeon taught us that it was safe and practically without mortality to invade the peritoneal cavity and uterus from above, and thus he led the way for our modern Cesarean section which has resulted in the saving of many lives. I propose to demonstrate to you that it is equally possible and infinitely less hazardous to invade the uterine cavity from below and bring about the safe delivery of the baby without pain

and suffering, or undue injury to mother and child.

THE POTTER METHOD OF PODALIC VERSION

I shall not attempt to give you the indications for a version, but rather confine my remarks to my method of performing version and the results to mother and child by reason of the operation. Of course, it is self-evident to you all that my range of usefulness and my field for its indications have become so broad, by reason of experience and much practice, that I use it, in normal conditions, simply to relieve women of the pain and suffering of ordinary childbirth by shortening the time of labor and that fact is demonstrated when I say that I personally delivered last year 1113 women, of which 920 were delivered by version, 400 being primiparae and 520 multiparae.

I have thought it best to describe as briefly and as fully as I can, my method of podalic version. The patient is prepared as for any major opera-

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tion, shaved, scrubbed and made as clean as possible. The operator is similarly treated and then gowned, with short sleeves and long gloves reaching to the elbow.

The woman is placed upon the table and anesthetized to the stage of surgical anesthesia, then there is no resistance to the various procedures to be carried out. She is then placed in a modified Walcher position, one leg held by an assistant standing on each side, or if no assistants are available, the legs are supported on two chairs while the operator stands between them.

The bladder is emptied of all its urine, and this is very important, as many patients void and still retain a half pint and more of urine in the bladder.

The vagina and soft parts are now dilated by first putting in one finger of the gloved hand, well lubricated with green soap, and passing it up as high as the cervix and then withdrawing it with a steady, continuous and firm pressure. Then two fingers are inserted and then three fingers, and finally the closed fist until all the rugae and folds of the vagina are thoroughly ironed out. It matters not whether the case be a primipara or a multipara, the procedure can be just as satisfactorily and completely done.

Now the cervix which must always be obliterated or soft and easily dilatable before version is ever attempted, is gently stretched with the fingers. Then the outstretched hand and the arm is pushed high up between the uterine wall and the membranes, and the latter are gently separated all over by sweeping the fingers of the hand up and down and around, being careful not to work too near the placenta.

Next a towel is rolled around the wrist to catch any of the amniotic fluid which might gush out when the membranes are ruptured high up. The hand is now free in the uterine cavity, the position of the child is made out and its probable size estimated, the position of the cord ascertained and the diameters of the pelvis approximated.

Both feet are now grasped between the first and middle fingers of the left hand—the left hand is always used for the version no matter what position the child is in. According to the position of the child, the toes of the feet will either look to the palm of the hand of the operator or away from it.

Now the extraction begins and both feet are brought down to the vulva and delivered together, the child's body having rotated with this onward movement.

Slight pressure is sometimes necessary at this stage to lift the head out of either iliac fossa with the right hand. Continued gentle traction is made until the knees are exposed, at which time the version is complete. Now rest for a few moments and then gently pull upon the anterior foot and lower leg until the pelvis of the child comes into view, when it will be seen that the pelvis rotates in the opposite direction and is

eventually delivered in that direction. This rotation is brought about by the traction on the lower leg and the baby comes into the world with its back transverse to the pelvic outlet. No attention is paid to the cord at this time if it is free and loose, which it usually is, but if it is tight and short a clamp is placed at the umbilicus and the cord is cut, if it can not be otherwise loosened.

We now proceed with the delivery of the scapulae which must be always thoroughly exposed and well out in view before any attempt is made to deliver the shoulder. Then the fingers and the hand of the operator are pushed well above the shoulder between the lips of the vulva and the anterior shoulder is delivered with the upper arm. The operator now grasps the baby with his hand over the exposed shoulder and chest and rotates the child's body so that the posterior arm comes anterior and is delivered as such. Both shoulders being now delivered, the lower arms usually fall out of themselves. If, however, they remain undelivered they can be gently lifted up across the chest of the child and drawn away from the perineum under the pubic arch. (You will observe that the baby in this rotation movement is not twisted from the legs as I have seen it done.) The older method of version brought the arm down as a posterior arm across the distended perineum, which was often the cause of the extensive tears consequent upon that method of podalic extraction.

The operator now determines whether there is any loop of the cord around the neck and finding none he proceeds with the delivery, but if the cord be twisted once or twice or even three times around the neck this condition of the cord must, if possible, be relieved, by loosening it, and if absolutely necessary, it must be cut and clamped. However usually the cord is free and no haste is called for.

The fingers of the left hand are now inserted into the baby's mouth and with the right hand gentle pressure is made upon the occiput over the pubes to aid in the flexion of the baby's head and also to direct its passage through the pelvic canal. The jaw is not pulled upon, as a fracture might result.

Up to this point no pressure from the outside has been made in the delivery because such pressure over the head before delivery of the arms, has a tendency to push the head down, which allows the arms to go up as well as extend the chin, complications, which at all times must be avoided, and I am sure it is this pressure that makes the difficulties and dangers of other methods of versions.

By this time the baby's mouth is exposed and the mucus is milked out of the throat by the fingers gently stripping the front of the neck, when the baby will begin to breathe and often cry aloud.

The head can be left in this position long

enough to thoroughly dilate the perineum and vaginal structures, as no haste is indicated and finally the nose is delivered, followed by the brow in an extremely flexed condition which is further assisted by lifting the body well forward and up from the perineum.

The baby is now placed upon its right side on its mother's abdomen and allowed to remain there until the cord ceases to pulsate. The ligature is now placed around the cord and the cord is cut and a hypodermic of pituitrin 1 c.c. is given deep into the muscles of the mother. The third stage of labor can now be completed immediately if any indication exists, or the placenta can be left from 15 to 20 minutes and often it is expelled spontaneously. If not, the gloved hand can be introduced and it can be extracted manually. The patient is now put to bed and usually with a binder.

SOME PROBLEMS INVOLVED

During the past three years a number of physicians have visited me in order to witness my technic in performing a version, and it is their questions and remarks that have suggested this paper. The impressions gained from talking with them leads me still further to the belief that very few men understand the technic or the advantages of a properly performed version. This ignorance is due largely (1) to an almost complete lack of teaching of this subject in our medical schools today and (2) to an amazing amount of inactivity or want of initiative on the part of the practitioner and especially the teachers and professors of obstetrics.

The following are some of the questions put to me by visitors and others:

What are the indications for version and why do you do it? What is the condition of the cervix when you attempt version? What position does the head occupy? How far is the head before version is attempted? Why do you bring down both feet instead of one foot? Why is the anterior arm delivered first? Why don't you hasten delivery after the umbilicus can be seen? How do you overcome extension of the head and of the arms over the head? How do you save the mother's soft parts, especially the perineum, from lacerations? Why your apparent indifference as to the child's breathing immediately after birth?

Let me answer these questions and at the same time epitomize and dwell on their importance. I also wish to point out that I do a version to eliminate the second stage of labor and thus relieve a woman of the pains and agonies of childbirth.

1. The cervix must be obliterated and the os dilated or dilatable, before version is attempted. This condition is easily determined by careful examination. The cervix need not always be entirely obliterated if it is soft and easily yields to the advancing hand.

2. The position of the presenting head is of no particular importance. A version can always be successfully performed if the presenting head can be lifted above the brim of the pelvis. Sometimes the head is so wedged in the pelvis, when the waters have drained away, that version is impossible. When this condition obtains, delivery by forceps or other means is necessary.

3. Both feet are brought down because the delivery is easiest when this is done; and, if necessary, in the interest of both mother and child, the labor can be terminated more quickly. By pulling on both feet the obstetrician distributes traction more evenly and thus secures a better dilating wedge.

Both feet, instead of one foot, should be brought down at the same time.

No attempt to deliver the arms should be made until the scapulæ are outside the vulva. The anterior arm should always be delivered first.

4. The anterior arm is delivered first because by so doing we relieve the stretching and tension of the soft parts of the mother, and permit rotation of the child's body so that the posterior arm now becomes anterior.

5. I never hasten delivery after the umbilicus comes into view because experience has taught me that haste is unnecessary; that severe complications such as extension of the arms and of the head are very apt to take place when we interfere with the natural forcing powers at this particular stage of delivery.

6. Extension of the head is overcome by aiding flexion of the head with the fingers of one hand in the child's mouth, and with the other hand making gentle pressure upon the head over the pubes.

7. The perineum and soft parts of the mother are saved, first of all, by deep anesthesia; secondly, by having the patient in the partial Walcher position, which gives one good control and admits of slow and safe delivery of the head after the vagina and perineum have been previously ironed out and properly dilated.

8. I am apparently indifferent to the child's breathing immediately after birth. Experience has taught me that nearly all of the babies begin to breathe spontaneously when let alone, provided the heart is beating. Occasionally when respiration is unusually delayed a catheter is passed into the trachea. Rough handling of the baby after it is born is never tolerated.

9. During the delivery, as soon as the mouth is exposed over the perineum the baby's body is raised up to let the mucus run out of the mouth. Blue babies give me no anxiety but white babies do.

10. The operator must remember that in the delivery of the head extreme flexion is necessary and that this flexion can be best produced by placing the fingers of one hand in the child's mouth and by making gentle pressure upon the head over the pubes with the other. If extension

of the head takes place notwithstanding every care, complications at once arise but in the hands of an experienced operator extension of the head does not occur or at all events is very infrequent.

11. When the chin and mouth have been delivered the mucus will run from the child's mouth and nostrils or it may be milked out by gently stroking the neck and thus many children will breathe before delivery of the head is complete. Therefore haste is unnecessary.

12. Too great pressure upon the mother's abdomen during delivery of the head should be avoided for fear of injuring the bladder or lower anterior uterine wall.

13. The after-coming head may be delivered by forceps if necessary.

14. The operator should at all times have a perfect knowledge of the position of the child *in utero* before version is attempted and an exact knowledge of this can be obtained only by introducing the hand to the fundus and exploring the uterus and the fetal parts carefully.

Men have criticized me for saying that I find posterior occipital positions in from 60 per cent. to 70 per cent. of my cases. It is because I examine these women many hours earlier and before rotation has taken place.

15. If the membranes have not been ruptured, it is well to separate them all around and as high up as possible from the uterine wall before rupturing them. The rupture should be made high up for the purpose of retaining as much of the amniotic fluid as possible.

16. When the knees of the child appear at the vulva, the version is complete.

17. The operator should be master of the situation at all times and with the child's chest resting in his hand he can watch the fetal heart as he can feel its pulsation in his hand. I have never broken an extremity in a living baby during version. On three occasions the humerus was broken in delivering dead babies and when haste was necessary in the interest of the mother.

18. The extreme lithotomy is not the best position for the patient when a version is performed. The modified Walcher position admits of better results by relaxing the soft parts of the mother. This position can be obtained only by having the assistance of two attendants who hold the legs one on each side or by allowing the feet of the patient to rest upon two chairs if assistants are not at hand.

19. When the child is born, it is placed on its right side across the abdomen of the mother. This position aids perhaps in the closure of the foramen ovale. The child remains upon the abdomen until the cord is tied and cut. At this point I should like to enter a protest against the too common practice of spanking or heating the baby to make it breathe, as this is unnecessary and may do harm. I rarely have to do anything except hold the baby up with its head down to allow the mucus to run out of the mouth or blow

a few times upon the child's chest to establish respiration quickly. Sometimes we breathe into the child's trachea through a small catheter but not very often. In my early practice I did this more frequently but now I know that haste and anxiety in inducing the child to breathe are seldom necessary.

20. The third stage of labor may be completed by delivering the placenta manually. It is my practice, however, to administer by deep hypodermic injection into the muscles of the mother, 1 c.c. of pituitrin immediately after the birth of the child and in a very short time the placenta is expelled with very little hemorrhage.

I never bag these cases, because a natural dilatation of the cervix is desired and this is not obtained when bags are used. The dilatation and retraction of the cervix which leads to the desired obliteration begins above and is not the same as that brought about by the use of bags. Bags also displace the presenting part and predispose to prolapsed arms, a thing that happened twice last week in New York City, which I have not seen before in three months.

ADVANTAGES OF THIS METHOD OF VERSION

Now what advantages do I claim for my method of version?

1. The woman suffers no pain after the dilatation of the os has taken place. Therefore I eliminate the second stage with all its suffering and it seems to me women will not dread their confinements and will have more children.

2. The soft parts are thoroughly dilated and are not for a long time subjected to pressure so that a relaxed, flabby vagina, and torn perineum and prolapsed bladder does not occur in our practice.

3. We see no temperature in our cases because we believe that tender tubes and ovaries, and perhaps many of them the subject of latent gonorrheal infections, are not lighted up into activity by the long pressure and bruising of the on-coming head.

4. The woman suffers no shock and therefore should be more resistant to possible infection.

5. There is no bleeding of any moment in our cases and the uterus remains contracted and in better condition after the delivery is effected. The lochia is less in amount.

6. We believe the baby's head is subjected to less compression injury than is the result after a long and tedious labor and especially after a forceps delivery. Therefore epilepsy and other cranial complications should be less common than after ordinary labors.

7. Of lesser importance but yet a justifiable consideration, the attending accoucheur is worked less, has more leisure and finds his specialty an agreeable one to practice, instead of what it is now, the bugbear of medicine.

MORTALITY AND MORBIDITY

The maternal mortality in properly selected

cases should be *nil*. The maternal morbidity is no greater and I am satisfied is much less, than that in normal cases and my records and temperature charts will prove this statement. Compression injuries to the baby's head are very rare. In my experience the mutilation of the soft parts of the mother is less than in forceps deliveries or as is seen in long protracted second stage labors and in the end these patients go home in good condition, happy, and well satisfied. I have never torn the perineum through the sphincter and only rarely up to the levator, while injuries to the bladder do not occur because the bladder is always emptied before the version is started and is always lifted so high up that it is not even seen during the delivery and therefore it is not torn off from its pivotal point of attachment at the internal os or from the descending rami of the pubes and ischium.

The fetal mortality was certainly no greater than that which is attendant upon other methods of delivery. Cord complications must always be seriously considered when we speak of stillborn children. I believe the cord is responsible for the greatest number of fetal deaths. In many cases this is not recognized on account of the concealed type of prolapsus funis, when the cord is caught between the head and the brim of the pelvis and the death of the child follows from pressure upon it.

STATISTICAL RESULTS

For various conditions I have delivered by version and reported, 2900 cases. I have never broken an arm or leg of a living baby—three times an arm of a dead baby was broken when haste was necessary in the mother's interest. I have never had any alarming hemorrhages and the period of involution of the uterus in all of these cases was shorter and with less lochial flow during the lying-in period. I never had a case of postpartum hemorrhage. Convalescence too was more rapid. I attribute this favorable condition to the absence of all shock which is so often experienced by patients who go through a long second stage of labor. The uterus was not tired out neither was the delivery precipitate. Then too there was present greater strength and a better sense of well-being at the end of the puerperium.

As I have previously stated, for the year ending August 31, 1920, I personally delivered 1113 women, 920 of which were delivered by version. Of the 920 versions, 400 were primiparæ and 520 were multiparæ. There were in this total number of cases:

- 80 abdominal Cesarean sections.
- 13 footlings.
- 22 breech cases.
- 2 vaginal Cesarean sections.
- 39 instrumental deliveries.
- 2 cases were delivered by instruments on

the aftercoming head following version.

There were 9 cases of twins.

12 cases delivered themselves before they could be reached.

There were 10 cases that were delivered as vertex cases.

There were 3 face cases, 2 with the chin anterior and 1 with chin posterior. It was necessary to do a craniotomy in one case.

There were 41 stillborn children, classified as follows: breech, 2; short cord, 2; hydrocephalus, craniotomy, 1; prolonged labor, faulty presentation, 1; prolapsed cord, no pulsations felt, 5; hydrocephalus, 2; hydrocephalus, spina bifida, 1; face presentation and prolapsed cord, 1; twins, premature, 4 months, 1; disproportion between child and pelvis (weighed 10 pounds each), 3; eclampsia, 1; macerated fetus, 6; monster, anacephalic type, 5; cord around legs and arm, 1; macerated fetus, specific, 1; albuminuria of mother, 1; L.O.P., 1; placenta previa, 7 months, 1; fibroid tumor, complicating labor, 1; brow, 1; marginal placenta previa at term, 1; diabetes in mother, 1; faulty position of head at term, seen in consultation, instruments had been applied, child dead, 1.

Of the complications those having to do with the cord were most numerous and seem to bear out my statement made previously that cord complications are the cause of the majority of our stillborn children.

There were 16 prolapsed cords; 10 short cords; complete knots were found in 3 cases; twisted cord was found in 2 cases; the cord was around the neck once in 37 cases, twice in 13 cases, three times in 3 cases, four times in 1 case, with a living child; once around the neck, and between the legs 4 times; twice around the neck and between the legs 2 times; cord between the legs, necessitating cutting before delivery, 5 times; cord around both legs, once.

There was one case of loose placenta and one of adherent placenta; marginal placenta previa, 7 cases; central placenta previa, 2 cases.

The largest baby was 12½ pounds, another weighed 12 pounds, 1 ounce.

There were 34 children who died in the hospital before being discharged or inside of 14 days from birth classified as follows: One congenital syphilis, aged 8 days. Fourteen convulsions, from 36 to 72 hours. These were not after difficult deliveries so I am satisfied they were not the result of cerebral or petechial hemorrhages.

One hemorrhage into and rupture of suprarenal gland—found by autopsy 4 days after birth.

Ten were bleeders living from 2 to 6 days who bled from the mucous membranes, bowels, eyes, nose, etc.

Five cases of inanition living from 6 to 10

days and the cause of these deaths I cannot explain.

Three monsters living from 2 to 3 days.

Two mothers died who had been delivered by version, one a poorly nourished patient sick with a colitis and running a temperature for a week before delivery, living 41 days and then dying

from the effects of her colitis which she had had for years. Blood cultures 3 weeks following delivery were sterile. The second case was up and around the hospital ready to go home, when she developed a lobar pneumonia, from which she died four weeks after delivery.

420 FRANKLIN STREET.

Acute Methyl Alcohol Poisoning*

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Editor's Note.—As Dr. Isaacs suggests the increasing incidence of poisoning with wood alcohol has certainly shown the necessity for an efficient method of treatment. Particularly wood alcohol appears to vary in its toxicity to different individuals. The symptoms of acute poisoning are those of depression of the medulla and the cranial-autonomic system and at times the sacral. There is usually a marked and early effect on vision. Unless the anatomic injury has been beyond repair there is a rapid disappearance of the symptoms following intensive alkali therapy. Many of the toxic symptoms probably accompany the acidosis, which, according to Dr. Isaacs, may be associated with formic acid production and with methemoglobinemia.

THE increasing incidence of poisoning with wood alcohol has shown the necessity for an efficient method of treatment. A study of a series of cases in the medical wards of the Cincinnati General Hospital has led to a plan of treatment that promises to be of value in saving life and in preventing blindness, the most serious of the complications of the convalescent.

The methyl alcohol is taken either in the form of denatured ethyl alcohol, or as commercial wood alcohol, usually with the intention of taking a substitute for whiskey. Cases of suicidal poisoning or accidental and occupational forms are also encountered. The symptoms vary with the amount taken, the type of the mixture and the length of time before treatment is begun.

SYMPTOMS AND PATHOLOGY

In the extreme cases the patients are brought in in a comatose condition, usually with cyanosis which sometimes is very intense. In a fatal case, in which the patient was admitted to the wards in a moribund condition, the color was a deep blue-black. The cyanosis is more marked over the upper part of the body—chest, arms and hands, neck and head—than over the lower part, although the feet may be blue and cold in severe cases.

Methyl alcohol appears to act as a respiratory poison, the rate of breathing in severe cases being reduced to six or fewer times per minute and quite shallow. In the mild cases the respiration rate may not be affected, and sometimes, especially if complicated by other substances, as ethyl alcohol, Jamaica ginger, lemon extract and other similar whisky substitutes, the rate may be more rapid, commonly 24. One case, complicated by strychnine poisoning and bronchopneumonia, developed a rate of 36. The breath usually has the

odor of methyl alcohol, showing pulmonary excretion of the poison.

The temperature is subnormal at times, but usually reaches 99° some time during the first twenty-four hours, remaining normal after this in the uncomplicated cases.

During the acute stages the pulse is accelerated, reaching 100 and over (120). In a fatal case the heart continued to beat for several minutes after respiration had ceased. With improvement, there is a slowing of the pulse. The heart sounds are usually clear, but not very forceful.

A characteristic feature is dilatation of the pupils, which, however, may react somewhat to strong light. With return of full consciousness, the patients usually complain of blurring of vision, noted in from one to twelve hours. Often the ophthalmoscope fails to show any abnormal appearance, although serous exudates along the course of the blood vessels, hyperemia of the disk, with blurring of the edges, sometimes of the nasal side only, and finally optic atrophy, with contraction of the retinal vessels and peripheral limitation of the field of vision, are sometimes noted. The conjunctiva may be congested.

Headache is usually experienced, being quite constant on the following day, with sometimes a feeling of numbness in the head. At postmortem there is a marked edema and congestion of the brain and meninges, with increase in the cerebrospinal fluid. On spinal puncture, the fluid is clear and under increased pressure. There may be no increase in globulin or cell count. Vertigo is frequently present.

Nausea is usually present, vomiting, frequently. The vomitus, sometime after gastric lavage, may still have the odor of methyl alcohol. Pain, at times cramplike, may be present in the epigastrium, with tenderness, or in the lower part of the abdomen. During the toxic stage there may

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be incontinence of urine and feces. Postmortem there is some edema of the gastric mucosa, with increase in mucus, and numerous deep red areas of ecchymosis. The liver is brownish, and the cut section is lusterless and very friable, and easily crushed. The kidneys show injection of the surface and internal vessels, and there is some cloudy swelling. During life the urine may show a trace of albumin, with or without casts, and is usually acid to methyl red. Acetone bodies are usually absent. A volatile compound, which reduces Fehling's solution, may be present. Krol¹ found an increased ammonia output in dogs. There may be a preliminary period of anuria. The blood often is a deep chocolate color, such as is seen in conditions in which methemoglobin is formed, and is spectroscopically similar. Harrop and Benedict² report definite findings of acidosis in a case of methyl alcohol poisoning, with the bicarbonate content of the blood plasma equivalent to 36.4 per cent. by volume of carbon dioxide.

The mode of action of the toxic agent is still problematic. Wassermann and Keysser³ considered the effect to be due to "toxic peptids" resulting from the action of the methyl alcohol on the proteins of the gastro-intestinal tract. Stadelmann⁴ suggested that the slow oxidation of the alcohol resulted in accumulation, with resulting toxic action. Magnus-Levy⁵ pointed out a possible similarity between the action of the poison and that of the toxins and ptomaines, and suggested the possibility of methylation of compounds found in the body. Kobert⁶ noted the selective poisonous action of the drug on different people, describing it as due to idiosyncrasy. Others consider the poisonous action to be due to the impurities, as furfural and oxalic acid. The action of the pure and impure wood alcohol, however, does not seem to differ materially (Hunt,⁷ Buller and Wood⁸), and the impurities themselves give other or less marked symptoms, in the amounts present (Baskerville⁹). Pohl¹⁰ considered that the toxicity was caused by the formation of formic acid from incomplete oxidation of methyl alcohol. The resulting "acidosis" was considered by Krol¹ to be the cause of the syndrome.

The symptoms seem to group themselves into a paralysis or depression of the medulla and the cranial autonomic system, sometimes the sacral, with an additional selective action on the optic and possibly other nerves. Symptoms may be severe after the drinking of small amounts, or light even after large amounts have been taken, depending on the individual and his previous experiences, as well as the conditions under which the methyl alcohol was taken, as after heavy excesses with ethyl alcohol.

TREATMENT

Various treatments have been recommended. These consist of stimulants, as caffeine, epine-

phrine, strychnine, digitalis, camphor, oxygen, pilocarpin and also potassium iodide. Gettler and St. George¹⁰ suggest saline or sodium bicarbonate infusions and phlebotomy, with repeated gastric and rectal lavage. Fenton¹¹ reports a case of blindness in which the patient recovered after the instillation of ethylmorphin hydrochlorid (dinonin) into the eyes. The patient was taking sodium bicarbonate freely by mouth. Harrop and Benedict² report the recovery of a patient following 5 per cent. solution of sodium bicarbonate intravenously.

The plan of treatment is based on alkalization and elimination. If the patient is not comatose, and is received within twelve hours after taking the wood alcohol, it is well to pass a stomach tube and wash out the contents with a 1 or 2 per cent. solution of sodium bicarbonate in warm water, as experience has shown that some of the alcohol is excreted into the stomach. Three or four ounces of a 50 per cent. solution of magnesium sulphate solution are then poured in through the tube and left in the stomach. Sometimes an hour or more after washing, the patient will vomit a considerable amount of food debris having a marked odor of methyl alcohol. The patient is put to bed, kept warm if his temperature is low, and is given 3 gm. of sodium bicarbonate, with about 250 c.c. of water every two hours, for about six doses, being awakened for his medication if asleep. Sometimes a whiff or two of aromatic spirits of ammonia will serve to awaken the patient enough to make him swallow. The dose of bicarbonate may be doubled without apparent ill effects. After this the patient is given 3 gm. of sodium bicarbonate with a glass of water, three times a day, one hour before meals, until the symptoms have disappeared. A safe guide as to the dose is to keep the fresh urine alkaline to methyl red. Fluids are forced, and a liquid diet is given until the acute symptoms are over. Then the diet may be as varied as the patient wishes.

If the patient is comatose, or if the cyanosis is very marked, with respiration much depressed, it is well not to wash out the stomach at first. In this case, or if medication by mouth is not retained, 1,000 c.c. of Fischer's¹² sodium carbonate (0.37 per cent.) sodium chloride (1.4 per cent.) solution at 99°F. is given slowly intravenously. *In case of any doubt, it has been our custom to give the intravenous injection.* No ill effects have been noted. If there is time and there seems to be congestion of the venous circulation from embarrassment of the right side of the heart, it may be well to draw off from 100 to 300 c.c. of blood before giving the intravenous injection. Half may be given at one time, and the other half later. It has usually not been necessary to give a second intravenous injection on succeeding days. A spinal puncture may be made if there is much restlessness and if there are signs of cerebral compression. After Fischer's solution

TABLE 1.—EXAMPLES OF CASES TREATED BY ALKALIZATION

Case	Material Taken	Condition	Blurring of Vision	Treatment Begun (After Taking)	Treatment	Comment
E-4829	½ pint denatured alcohol (with methyl)	In coma; cyanotic; pupils dilated; blood deep chocolate color	+	4 to 10½ hours	1,000 c.c. Fischer's solution intravenously; later, gastric lavage; sodium bicarbonate, etc. by mouth	Improvement within 3 hours; after third day all symptoms had gone; recovered with no impairment of vision
E-4837	1 pint denatured alcohol (with methyl)	Semicomatose, cyanotic, "head felt numb"	+	Over 12 hours	Gastric lavage; magnesium sulphate; 900 c.c. of Fischer's solution intravenously; later, sodium bicarbonate, etc., by mouth	Rapid recovery with no impairment of vision; discharged after 5 days
E-4908	¾ pint denatured alcohol (with methyl)	Recovered consciousness on reaching hospital; slight cyanosis; pupils dilated, nausea, headache	+	About 4 hours	Gastric lavage; magnesium sulphate; sodium bicarbonate, etc., by mouth	No symptoms remained after second day; recovered with no impairment of vision.
E-678	1 pint of whiskey; 4 ounces of bay rum	Conscious, "going blind," face flushed; abdominal pain; conjunctiva congested	+ Within 1 hour	2 to 3 hours	Gastric lavage; magnesium sulphate; enema; sodium bicarbonate and citrate, 40 grains of each, every hour, with 8 ounces of water	Complete clearing up of vision in three days
E-4963	Lemon extract, 24 oz.; 3 or 4 drinks of supposed "whiskey" (with methyl alcohol)	Cyanosis; vomiting; headache; vertigo; unconscious	+	4 to 5 hours	Gastric lavage; magnesium sulphate; 1,000 c.c. Fischer's solution intravenously; spinal puncture; later sodium bicarbonate, etc., by mouth	After 12 hours, vision was "as clear as before" the attack; complicating syphilis, chronic alcoholism, aortic dilatation; discharged with no bad effects.
E-5165	1 ounce of supposed "whiskey" (with methyl alcohol)	Felt weak; dizzy; stuporous; pain in abdomen; vomiting; slight cyanosis	+ Congestion of nasal halves of both disks	8 hours	Gastric lavage; magnesium sulphate; colonic flushing; 800 c.c. Fischer's solution intravenously; later sodium citrate and bicarbonate by mouth	Vision clear by third day; discharged recovered
TABLE 2.—CASES NOT RECEIVING ALKALIZATION						
Case	Material Taken	Condition	Blurring of Vision	Treatment Begun (After Taking)	Treatment	Comment
D-4440	8 ounces of "wood alcohol"	Dyspnea, cyanosis, cough and rusty sputum in last 8 hours; tremors	?	About 20 hours	Gastric lavage; magnesium sulphate; later, sodium bromid, scopolamin, tr. digitalis, caffeine sodium benzoate; atropin sulphate (each when indicated)	Developed pneumonia and died
E-4804	4 or 5 (?) ounces of clear solution containing wood alcohol	As in Case E-4829, marked respiratory depression with cyanosis; pupils dilated; unconscious	?	Not known; probably within 4 hours	Caffeine sodium benzoate; epinephrin	Respiratory paralysis; patient died within ½ hour after reaching ward

there appears to be a dehydration of the nervous tissue, with increase in spinal fluid. The breathing usually improves rapidly, the mental state clears, and in from six to twelve hours the cyanosis has virtually disappeared. There is rapid improvement in the eye signs, the blurring of vision disappearing in from twelve to twenty-four hours, or sometimes a slightly longer period. The abdominal tenderness soon disappears.

It is well for the patient to remain in bed until the cyanosis has disappeared and the mental

confusion has cleared. The bowels should be kept open with magnesium sulphate. The average stay in the hospital was about five days, with treatment for two or three days. It is well to have the patient return at intervals to note whether or not there has been any permanent damage. All our patients have had homatropine or atropine sulphate dropped into their eyes for ophthalmoscopic examination.

The tables show some of the symptoms and effects of alkalization as opposed to the method of

stimulation only. The toxic symptoms are produced by widely different amounts in different individuals. The blurring of vision varied from inability to count fingers held about a foot in front of the eyes to inability to read ordinary newspaper print, but with enough light perception to count fingers. These conditions had cleared up entirely at the time of discharge.

SUMMARY AND CONCLUSIONS

1. Wood alcohol appears to vary in its toxicity to different individuals.

2. The symptoms are those of depression of the medulla and the cranial autonomic system and at times the sacral. There is usually a marked and early effect on vision.

3. There is a rapid disappearance of the symptoms (unless the anatomic injury is beyond repair) with intensive alkali therapy.

4. Many of the toxic symptoms probably ac-

company the acidosis, which may be associated with the acid production (formic) and with methemoglobinemia.

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The Successful Treatment of Asthma*

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Editor's Note.—The treatment of any disease as prevalent and distressing as asthma, especially when it is based upon an entirely new conception of the causative factor of the conditions, cannot but be of intense interest to the entire profession. Dr. Knapp maintained that there is but one kind of asthma—bronchial asthma. The fact that diseases of other organs co-exist with asthma establishes no causative relation between such other diseases and asthma. Nor does the nature of asthma preclude the presence of diseases of other organs. No proof has ever been adduced, according to Dr. Knapp, nor can there be adduced, that asthmatic spasm is due to spasm of the bronchial tube. The proper interpretation of the physical signs in a paroxysm makes such an assumption impossible. Hence asthma must be recognized as the pulmonic symptom of a gastro-intestinal condition, and while various causes may provoke an asthmatic spasm, the cure of asthma depends solely on the physician's ability to cure the underlying gastro-intestinal condition. Neither climatic, nor atmospheric conditions or changes cause asthma, but they do exercise some influence in the progress of the cure. Asthma is not confined to either sex or age; male and female, young and old suffer alike. After reading Dr. Knapp's paper the general practitioner will find that the prognosis of uncomplicated asthma is excellent and that most of his asthmatic patients are curable in about four months.

THE topic for discussion concerns a subject, the conception of which has remained unaltered and unchallenged for many centuries. Asthma, we are taught, is a condition of spasm of the bronchial tubes which is brought about by various causes. If I differ from such teachings and challenge their correctness, it is not because I lack the due reverence, which everyone of us owes to our forefathers in medicine, but because my accidental discovery of the cause of asthma has forced me to foresake the ancient conception and to substitute for it a theory, the correctness of which has been substantiated by an experience in over four hundred cases.

The watchword of medicine must be progress and the test of the correctness of any theory must be the result obtained when following the dictates of such theory. True science demands

that we examine and, with unbiased mind, analyze every new theory which promises improvement on our old ideas. Just because the newly propounded teaching markedly differs from our accepted views is no reason why one should lay it aside contemptuously. Quite the contrary. The theory which I here propose to elaborate on, not only is in marked contrast with the present ideas, but the results obtained, because of this theory, border on the miraculous. May I ask the reader to suspend his natural aversion to and prejudice against innovations until he has finished reading this paper and that he may pay close attention to my remarks and my reasoning.

OBJECTS

My object is, *first*, to prove that the present understanding, that asthma is produced by a spasm of the bronchial tubes, is absolutely erroneous; and, *secondly*, it is my desire to establish the correctness of my conception, that asthma is the off-spring of a pathologic gas-

*From American Medicine. The author's death occurred some time ago and his article is reproduced with the permission of his son, Dr. Victor Knapp, 616 Madison Ave., New York City.

tro-intestinal condition. To prove either and both my contentions I shall have to call to my assistance the well-settled and well-proved laws, as are embodied in physical examinations. I must have recourse to this just because the direct proof is unavailable and, so far, impossible. I shall attempt to prove that the old teaching is based upon nothing more fundamental than speculative imagination, as no one as yet has been able to directly observe the presence of the assumed spasm. To do this it would be necessary to open the lungs and look at the bronchial tubes during their supposed spasm. For excellent reasons this has not yet happened. No asthmatic has as yet permitted his chest to be opened in order that we may learn of the actual condition of the bronchial tubes when he wrangles for air. Nor has anyone died during an attack of asthma and had an autopsy performed immediately after. Nor could an autopsy have availed us any, as a spasm is the expression of a vital function and death suspends vital functions. For like reason the opening of the chest under an anesthetic would fail to show a spasm; complete anesthesia would overcome a spasm. The X-ray, to my knowledge, has not yet been attempted, and during the spasm the patient is not in a quiet condition, but moving violently and, therefore, the employment of the X-ray is precluded.

FALLACY OF PRESENT TEACHING

In order to prove the fallacy of the present teaching by indirect proof, I shall rely upon the clinical evidence as manifested by the sufferer's behavior during an asthmatic attack. Whether the patient is seized while in bed or out of bed, he always assumes during the attack a position which is most favorable to expiration. We also observe that it is not the inspiration which is labored, but the expiration. These are facts which are not and cannot be disputed. The picture of the chest is that of fulness in all of its diameters. These facts are not only not in consonance with the theory of an existing spasm of the bronchial tubes, but are diametrically opposed to such an assumption. What does a spasm mean? A spasm means a muscular contraction which is much more violent and forceful than is a normal contraction, and also is of longer duration than is a normal muscular contraction. In a contraction of the muscular structure of a tubular organ, the lumen of such tubular organ is lessened. This lessening of the lumen is in direct proportion to the force of the contraction; the more forceful the muscular contraction, the lesser is the lumen. A spastic contraction is synonymous with an amplified contraction and an amplified circular contraction of a tube means that the lumen becomes much less than it would become on normal contraction.

Accordingly, the physiologic effect of a spastic contraction of the bronchial tubes would be a circular contraction, therefore a constriction of

the bronchioles. Since the physiologic function of the bronchial tubes is to afford a passage for the entrance of air into the lungs, a constriction of such tubes must have as a consequence a lessened quantity of air passing through a lessened lumen. The smaller the lumen through which the air can pass, the less is the quantity of air which can reach beyond the constriction. If a quantity of air, less than normal, reaches the air vesicles, the air vesicles will respond in distention to a lesser degree, the air cells will distend less and the aggregate distention of all the air vesicles will naturally bear upon the entire distention of the lungs as a whole. In fewer words, a constriction of the bronchioles must produce a diminished expansion of the lungs. In the condition of hyperdistention of the thoracic cavity, due to whatever cause, we see on inspection not only a larger chest, but especially a distention, a bulging out of the intercostal spaces.

Conversely, a retraction of the organs of the chest becomes manifest by the retracted condition of the intercostal spaces. The intercostal spaces are the index of the state of the relative distention of the thoracic organs. If the intercostal spaces are filled out, distended, bulge out, then, in the absence of any other condition within the chest wall, such bulging out is due to distention of the lungs. But if, on the other hand, there is a check to the quantity of air which can enter the air cells, the lungs cannot distend to their normal capacity and, whatever else may happen, the bulging out of the intercostal spaces cannot happen. Thus, the element of the distention of the lungs being dependent upon the quantity of air which is supplied to the air cells, it is immaterial at what particular point the air supply is shut off or interfered with, in order to produce a retraction of the intercostal spaces. All that is necessary is that the air supply be shut off or diminished before it can reach the alveoli.

Certain pathologic conditions which are open to our inspection do cause a constriction of the air passage right at the beginning of the respiratory system. I refer to spasms of the larynx and trachea, to swelling of these structures, due to inflammatory or edematous changes and to growths. Under any of these conditions a less quantity of air enters the lungs. What is the clinical phenomenon we observe herein? The patient struggles in inspiration, the inspiration is very much prolonged and labored, the supra- and infra-clavicular and the intercostal spaces are not only not bulging out, but are retracted. In other words, the clinical picture we here find in the actual demonstrable obstruction to the passage of air fully conforms to the reasoning followed out above and with which we have all been familiar since our student days.

But the clinical picture of the chest during an asthmatic attack is in marked contrast to the one just portrayed. The asthmatic has no dif-

difficulty in inspiration; it is the expiration which embarrasses so much. During the asthmatic attack the supra- and infra-clavicular and the intercostal spaces are distended and bulge out. How could we be guilty of assuming two diametrically opposite manifestations to be due to the self-same cause. If obstruction to the entrance of air into the lungs produces retraction of the intercostal spaces, how can we allege that bulging out of such spaces is also due to obstruction? In the demonstrable obstructions of the larynx and trachea there is difficulty in the inspiration; in asthma the difficulty is in the expiration.

Also auscultation confirms the proper interpretations of the inspection. The inspiration is free and relatively much shorter than the expiration, and the asthmatic râles are heard in expiration. It is impossible to affirm, without doing violence to one's logic, that two oppositely contrasting phenomena are the result of the same identical cause. If, as we know, obstructions to the larynx and trachea cause difficulty in inspiration and retraction of the chest, then free inspiration with difficulty in connection with bulging out of the chest cannot possibly be ascribed to obstructed inspiration, to the presence of a spasm. Two different phenomena must have two different causes. Asthma has been known for centuries and the assumption of a bronchial spasm as its cause apparently appeared plausible enough to the first writer, whose teachings were copied for centuries. Such teaching has thus acquired a sacred solemnity which no one dared dispute or challenge. There is no spasm of the bronchial tubes in asthma.

NATURE, CAUSE AND MECHANISM OF COUGHING

The proper understanding of the nature and cause of the asthmatic spasm requires the proper understanding of the nature, cause and mechanism of coughing. Here again we meet with time-worn and erroneous assumption from which we cannot easily extricate ourselves. Unfortunately, ordinarily the layman and the physician understand by cough the synonym of *catching a cold*. This *cold* is rather a very unscientific and very highly misleading expression, but for the sake of convenience and brevity I will retain this expression, giving it the same meaning as the laity. A person coughs and goes to the physician with the self-made diagnosis of having a *cold*, and the physician not only adopts this diagnosis, but also prescribes for it. Why, then, wonder at the many failures in the attempt to cure such *colds*? It is true that cough is one of the symptoms in bronchitis and pneumonia. Yet it is not true that all coughs are due to these causes. From my own experience I feel justified to assert that only a very small minority of *coughs* are caused by the so-called *colds*.

On recollection we know of many cases where a slight irritation of the throat by a very fine

hair, or morsel of food, or some powder was sufficient to cause a most violent fit of coughing, which persisted until the irritant was dislodged. Spraying and swabbing the throat always excite coughing. Again, we are not unfamiliar with the so-called *stomach cough*, something we know does exist, although its exact nature is still a matter of speculation with most of the profession. The several instances just enumerated give us a variety of elements distinct from each other, yet calling forth one and the same effect, namely, the coughing. Strict adherence to scientific reasoning will not permit us to hold one and the same result as the effect of various and distinct causes. If, nevertheless, the same result is obtained from apparently different agencies, then the implication must be that all these various and distinct agencies have somewhere one element or one point which is common to them all. From the illustrations just cited as producing cough, an element or point which might be common to them all does not appeal as a plausible assumption.

But, since to produce cough, we must have not only the irritant, but also the necessary anatomical structure upon which the irritant shall act, and since the irritants alluded to seem not to have a common element might we, perhaps, find that the enumerated irritants all converge their irritating action upon one and the same anatomical structure? If the latter proposition can be established, then the solution of the nature of the cough is made. That a hair which lodged on the posterior pharyngeal wall and that swabbing of the posterior pharyngeal wall do excite coughing is a matter of common knowledge. If we pass through an atmosphere which is charged with noxious powder particles and cough as a consequence, we would not be justified in categorically denying the possible lodgment of some powder particles upon the pharyngeal wall. The irritating particles could have gotten on to the pharynx either through the nose or the open mouth. The first two illustrations as of a positive fact and the latter illustration as a possible fact—certainly not a deniable fact—are sufficient to point out the pharynx as being at least one structure which, when irritated, will excite coughing.

Vomiting is quite often succeeded by a spell of coughing. We might, perhaps, in this instance call the coughing an expression of a reflex action. However, we would not deny that the gastric contents, in order to be vomited up, had to pass the pharynx. If the gastric contents were irritating enough for the stomach to be ejected by it, were they less irritating when they reached the pharynx? Irritants proceeding from the stomach, especially when they are of a gaseous nature, can and do easily reach the pharynx and if they irritate the stomach they also irritate the pharynx, and hence the coughing. The cough is, therefore, not due to a reflex action from the stomach but to the direct irrita-

tion of the pharynx by irritants of the stomach having reached the pharynx. But also irritants located or generated in the intestines can reach the pharynx if the pylorus permit the passage. In other words, if the pylorus is insufficient, if it is relaxed, if it does not close, no obstruction is offered to the intestinal irritants on their way up from the intestines through the stomach and esophagus upon the pharynx. Whether this is the genealogy of all of the so-called stomach coughs is immaterial. It certainly may be the genealogy of some stomach coughs.

Let us now proceed in our attempt to explain, upon the same basis, the cough of bronchitis and pneumonia. I will adhere to my principle of leaving out of question the nervous system and reflex actions. Can we assume a direct irritation of the pharynx also in these pathologic conditions? Aside from the fact that we find mostly the pharynx also affected in bronchitis and pneumonia we know that mucus is being decomposed in the bronchial tubes and lungs and that there are present here chemical irritants which are forced out through the mouth. Again we see the pharyngeal irritation not as a possibility, but as a fact. Reasoning from these premises, would it not be advantageous to tracheotomize all patients in whom we find abscesses or pus-filled cavities in the lungs so as to prevent the exhausting cough and the necessary irritation of the larynx with its fatal consequences? Either upon inquiry, or volunteered by the patient, we get the history that the patient feels a sense of choking in the region of the larynx before he starts coughing. To assume the presence of chemical changes of the greenish or yellowish or rusty mucus, which cause acrid, irritating gases to ascend previous to the throwing up of the mucus, need not tax or overburden our powers of imagination. If a hair or the swabbing of the pharynx may cause coughing, why could not the chemical irritants which were produced from the chemical changes of the bronchial or pneumonic mucus be responsible for a like effect? So far there seems to be nothing in the way to hold out the pharynx as perhaps the chief, if not the only, structure which must be irritated in order to evoke coughing. In the discussion of asthma we will find it most essential to recognize the pharynx as the anatomic structure whose irritation is responsible for the severe spasms of coughing.

Having to the best of my ability attempted to explain the cause of the cough the question now is, what is the mechanism of the cough? This depends upon two factors: respiration and muscular contraction. A deep inspiration is taken and the ordinarily following expiratory movement is voluntarily modified by the action of all the expiratory and the pharyngoglossal mus-

cles. The former muscles attempt expiration and the latter obstruct and check it. The greater the obstruction of the pharyngoglossal muscles the greater the force and violence of the expiratory muscles. When both sets of muscles act simultaneously, the air held between these sets of muscles is put under great tension and acts solidly in one body as a piston. This is the pneumatic piston. Under the force of the expiratory muscles this pneumatic piston not only drives any matter which can be dislodged before it, but also excites peristaltic action in such organs as are capable of it, mechanically stimulates glandular secretion and milks the glands.

The expiratory muscles are sufficiently known and understood by all the physicians. I wish to dwell somewhat on the action of the pharyngoglossal muscles, which are most concerned in the act of coughing. These are the inferior and the middle constrictors of the pharynx and of the glossal muscles it is especially the geniohyoglossus. The inferior constrictor is attached to the sides of the thyroid and cricoid cartilages and the middle constrictor is attached to the hyoid bone and stylo-hyoid ligament. The geniohyoglossus is attached to the jaw and to the hyoid bone, and the hyoid bone is united by ligaments with the thyroid cartilage. The fibres of these muscles are so arranged that when they act all together the tongue is drawn backward and downward, the pharynx is drawn forward and downward and the larynx is drawn upward and backward. The combined action of all these muscles closes up the entrance into the esophagus and to the larynx. Under the influence of an irritation the pharyngoglossal muscles contract and the escape of air from the larynx and esophagus is prevented. Preceding the action of these muscles the patient takes a deep breath and the inspired air is prevented from escaping in the manner just cited. Now the expiratory muscles begin their action. A series of convulsive expiratory contractions follow every inspiration, the expiration is broken up into a series of convulsive contractions of the expiratory muscles which act on the pneumatic piston previously mentioned.

If the offending material is of a mechanical nature and not firmly imbedded, the concussions of the pneumatic piston and, in the case of the esophagus, also aided by peristalsis, will soon eject the offending matter. But if the irritant is of a chemical nature the coughing spasms will continue until the irritant is diluted or neutralized by the secretions and is then expelled. Another illustration of the action of the pneumatic piston may be found in the normal act of *blowing the nose*. A deep breath is taken, the nostrils are occluded with our fingers and then we *blow* the offending matter out. When the irritant which excites the coughing is of a mechanical physical nature the violent cough contractions will soon expel the offensive matter. Likewise will the responsive coughing soon cease

when the irritant is a chemical, introduced from without the body. But, when the chemical irritant proceeds from within the body and is constantly being generated, the coughing will persist so long, until no more irritant is generated. This may continue for hours.

But with the persistence of the cough other corollary effects follow. Because of the continuous and violent contractions of all the muscles concerned, not only do these themselves weaken, but they produce soreness and pain of the bones there, where they are attached. With the persistence of the chemical irritation and therefore, with the persistence of the cough that is, with the persistence of the expulsive efforts, the contractile force of the muscles gradually weakens. The result is that as the muscles weaken, yet the irritation persists, the efforts of the sufferer to expel the irritant are much more augmented with the consequent greater weakness and exhaustion of the patient.

Given on one hand the unimpeded full inspiration and, therefore, the full distention of the air vesicles of the lungs together with the occlusion of the esophagus and larynx and, on the other hand, the hammering contractions of all the expiratory muscles acting upon the fully distended lungs, the result must be the insidious, gradual attenuation of the fine walls of the distended air vesicles. The necessary result can easily be foreseen. The distended and attenuated air cells sooner or later must lose the elastic contractile power of their walls. This condition is responsible for the development of emphysema, which is such a frequent concomitant of asthma.

THE NEWER CONCEPTION OF THE CAUSE OF ASTHMA

After the foregoing remarks I am ready for the discussion of asthma itself. The reader has already gathered from the preceding remarks that I deny, and most emphatically so, the present conception of the nature of asthma. I have attempted to argue and to convince the reader that the present understanding of asthma is absolutely barren of any underlying facts and that it is merely an inheritance of groundless and unproved speculation of centuries past. In our due reverence for our past teachers and in the absence of any different ideas, the old and ingrained precepts went by unchallenged. I have attempted to reason with the reader and to convince him of the fallacy of the present dominant views. I shall now endeavor to spread before the profession my own reasoning as to the cause of asthma and as confirmed by upward of 400 cases.

My association with the treatment of asthma came to me not because of any infatuation with the subject, the why and wherefore of which I had set out to investigate. I never intended to do any original research work in that mysterious malady. My interest in asthma came to

me unexpectedly and the cure of it as a mere discovery. Not until I had cured the fourth consecutive case have I begun to search for the connection between asthma and diseases of digestion, my specialty. It happened in the following manner: Some 16 years ago a woman came to consult me about her stomach trouble. In giving me her history she also remarked that she had been suffering for many years from asthma, which fact was evident enough without her mentioning it. "Doctor," she said to me, "if you can only give me a little relief from my stomach trouble I shall be very glad. Don't bother about my asthma. Doctor J. is treating me for it and I know that there is no cure for asthma." Indeed, I felt very happy that the patient did relieve me of possibly having to take care of her asthma. The patient suffered from *Insufficiencia Pylori* and required daily treatment. After the tenth or twelfth treatment the patient told me that her asthmatic attacks were not so bad as they used to be. Gladsome as the news was I paid no attention to it and continued my treatment of her stomach trouble. Several weeks after the patient surprised me by telling me that she had no more asthma. Being interested in her welfare I was certainly very pleased to hear it, but what did I have to do with it? An accident, I thought, and dismissed the incident from my mind.

The second asthma case came some time after. Here again the patient suffered from insufficiency of the pylorus and the second asthma cure was accomplished in the course of a few weeks. Another accident I thought. A third asthma patient came in due time in which the gastric diagnosis was insufficiency of the pylorus, and after some few weeks of treatment the third asthma miracle was worked. This rather puzzled me. I now had three consecutive cases of asthma and all three got well. However, I did not think of it in any other light, but that I merely had good luck and made up my mind to take advantage of it the next time.

So that when the next asthma case came I very cautiously held out a slight hope to the patient of possibly being able to cure his asthma. This promise involved no risk for me as the patients came to me only for the cure of their stomach troubles. For the fourth time there was the association of insufficiency of the pylorus with asthma, and the cure of both. I now began seriously to think over the matter. The undeniable facts were: *First*, that all four patients had insufficiency of the pylorus. *Second*, that all four patients had suffered from asthma, and *third*, that all four patients were cured of their asthma. Furthermore, I was sure of one thing; that The Diety had not selected me to work miracles through. Reflecting over these facts I came to the conclusion that there must be a relation between the asthma and the insufficiency of the pylorus. What was it?

A CONSIDERATION OF PYLORIC INSUFFICIENCY

Let me now give a brief summary of *Insufficiency Pylori*. The diagnosis of insufficiency of the pylorus is to be made when one hour after the test breakfast either no contents at all are aspirated from the stomach, or very little and that little is usually imbedded in mucus. Although I have published about a dozen articles on the subject I would advise those who are interested in the subject to read my first paper.* (In parenthesis I wish to make these following remarks: If the examining physician find no contents one hour after the test breakfast, he must make sure that the stomach tube entered the stomach and not possibly an esophageal diverticulum, which was empty of contents.) According to the degree of the insufficiency the ingested food leaves the stomach sooner or later, and either not digested at all by the stomach or a good deal of the ingesta pass into the duodenum undigested.

Medicine assumes the existence of *vicarious action*; but if this hypothesis holds good anywhere in the body it finds no application in gastro-enterology. A cursory reflection on the mere elements of digestion is sufficient to stamp such an assumption of vicarious digestion as an impossibility. Gastric digestion is acid; intestinal digestion is alkaline. The food articles are only chemical compounds and chemical compounds cannot be acted on alike by acids and by alkalies. We know that the stomach digestion is acid and we also do know that food is being digested by the acid stomach. How can we assume that the chemical elements of the food which nature intended to be digested by an acid medium, could be digested by the alkaline secretions of the intestine? The clinical proof is that it cannot. The chemical elements which nature intended to be digested by the acid stomach cannot be digested by the alkaline intestine.

When, in insufficiency of the pylorus, the ingested food or part of it passes out into the intestine without first having been digested by the stomach, such parts as have not been digested undergo in the intestine fermentation or decomposition, or some other chemical processes with the production of gases and of volatile acids. The result of this is increased intra-abdominal pressure, which is clinically evident by compelling the sufferer to loosen his or her clothing. This latter phenomenon is familiar to all of us.

Just let us pause now and think over this increased intra-abdominal pressure. Is this pressure exerted only against the abdominal wall? May we not correctly assume that the pressure is not limited to the abdominal wall, but that it acts with unabated force in every direction and, therefore, also against the diaphragm? Surgeons meet with this condition and find even the liver, the heaviest of our organs, occasionally pushed into the thorax by the strong intra-ab-

dominal pressure. The pressure thus exerted upward against the diaphragm and, therefore, against the thoracic cavity not only puts a formidable obstacle to the normal excursions of the heart and lungs which these have to overcome, but also very much diminishes the breathing capacity of the lungs. The lungs thus shut in in the bony cage which the ribs represent and, therefore, cannot escape the forceful pressure from below, must suffer compression. Under such conditions the actions of these most vital organs, the heart and lungs, are violently interfered with. It stands to reason that the longer the thoracic organs are prevented from functioning normally, the greater will be the damage. The lungs attempt to expand and at each attempt they meet with obstruction from below. This happens eighteen times in a minute and persists not for one minute, nor for one hour, nor for one day, but for days, weeks, months and years. That such state of affairs cannot have a salutary effect upon the lungs will hardly be disputed.

Herein, I thought, I had to look for the cause of what is clinically seen as asthma. After I had assured myself of the correctness of this reasoning, the relationship between asthma and the insufficiency of the pylorus became manifest. Also, I understand now, why the four patients got well, namely, with the cessation of the increased intra-abdominal pressure. With the cessation of the pressure upward against the lungs, these were permitted gradually to function normally. We thus find the explanation for the first element in the production of the asthmatic constitution.

The second element is the cough and the cause of the cough. I have already alluded to the formation of acid gases in the intestines as the result of undigested gastric contents getting into the intestine and here undergoing decomposition or fermentation. These acids are irritants and act as irritants upon any surface with which they come in contact. As these acids ascend they cause irritation along their tracks. The irritation of any mucous membrane calls forth contraction of the underlying muscularis and the contraction of this is in direct ratio to the degree and duration of the irritation. The acid gases as they rise from the gastro-intestinal canal to the esophagus and beyond cause irritation all along the esophagus and of the pharynx as well. As the consequence of this the corresponding and irritated muscles of the pharynx do contract. Contractions of the glossopharyngeal muscles, cited above, close the lower part of the pharynx and with it prevent the escape of the irritating acid gases. These accumulate below the constriction and cause here distention. This the patient feels and describes as *choking*, or as a *lump*, or as "something sticking there." There is now an irritant which continues to be generated in the intestines for perhaps several hours, during all of which time the patient tries vainly

*Philadelphia Medical Journal, May 24, 1902.

to rid himself of it by coughing. As mentioned before, the continued coughing gradually weakens and dilates the alveoli. Thus weakened the lung tissue becomes easily susceptible to various attacks.

ETIOLOGY

I have already sufficiently dwelt on what I consider the cause of asthma. However, I wish to discuss very briefly what the books allege to be the cause of asthma. Let me speak first of *heredity*. It is true that we find asthma in several succeeding generations and in several members of the same family. Does that prove heredity? By heredity I mean something which we cannot possibly escape, which has been implanted upon us during uterine life. Perhaps a little anecdote will not be out of place. Very often after our daily clinics at the Augusta Hospital, Berlin, Professor Kutner, the late assistant to Ewald, would assemble all of us when we would discuss whatever appeared worth while discussing of the clinical material. So it happened that once I mentioned the fact that I had been treating the father, mother and several children for achylia gastrica, a disease, the existence of which I now deny. Here was something to talk about. Doctor Kutner then turned to the first assistant and asked his opinion. The gentleman addressed thought it was rather strange and suggested that it would tend to point to heredity. The other gentlemen also were of this opinion. Now Dr. Kutner turned to me and asked me what I would suggest. Whereupon I began to laugh. "Why do you laugh?" asked Dr. Kutner.

"Well," I said, "do you want to know what I think is the matter?"

"Of course, yes," was the answer of Dr. Kutner.

Whereupon I replied: "*The trouble here is a bad cook. If we are to admit heredity at all, and argue that the children inherited the disease from their parents, how could the spouses inherit the disease from each other? It is true that asthma may run in the family, but not because that the one inherited it from the other, but because they were all brought up on the same faulty diet. A father and mother are presumed to love their child. If the parent believes in a certain food, not only will he eat it, but he will also insist that his child eat of it; believing that this particular food is good for him, he wants his child to also have the benefit of such food. If now, in the course of years, that particular food caused disease to the parent, how could the child escape it?*"

Neither *age* nor *sex* has any influence upon asthma. My youngest patient was six months and my oldest 84 years old. Both sexes are equally affected.

There is a very widely entertained belief that asthma is due to some *nasal disease*. I have lately had a patient who told me that she had no

less than 15 nasal operations. To be conservative, I believe to have had at least one-third of my cases in whom one or more nasal operations have been performed for the cure of asthma. Had they been cured they would never have come to me. This, however, does not argue that if a nasal operation is necessary, that it should not be done. While nasal conditions may have their influence upon asthma they are not the cause of asthma.

The most common conception is that asthma is caused by the inhalation of some *pollens*. But the fact is that only a very insignificantly small number of people who suffer from asthma have ever been in the neighborhood of such plants. Furthermore, the majority of asthmatics begin to suffer in winter, at a time when there are no pollens to inhale. *Animal odors* are also accused as being the cause of asthma; I have not yet met any of such cases in my practice.

Many hold the *climate* as responsible for asthma. My patients have come from all parts of the country and from all altitudes and from all climates. I am just now treating a patient who several times was sent to the mountains by his previous physicians, and had to leave there after a few days because his asthma became very much aggravated. Others went through a like experience when they went to the seashore on the recommendation of their attending physician. And, while climate has no bearing at all in the etiology of the asthma, atmospheric conditions do exercise an influence; some patients get worse in damp weather and others are distinctly benefited by it.

Cardiac and renal diseases have also been made to carry the burden of responsibility in the causation of asthma. There is no denying that there are many cases of asthma associated with either heart or kidney disease. But where is the proof that they are causally correlated? I had such combinations in my practice, but the number of these is very small. I fear that the diagnosis of cardiac asthma was based chiefly, if not altogether, on the clinical symptoms of pain and distress in the region of the heart. I have seen those cases time and again when patients came to me with the diagnosis of cardiac asthma, made by the physician, when the heart was perfectly well and which had ceased to give any symptoms once the asthma was being treated. In these cases the patients will sometimes continue to evince anxiety about the condition of their heart, although neither the asthma nor the heart causes them any trouble. The assumed heart disease, which was based on the history of pain in the cardiac region, was due to the intra-abdominal pressure forcing the diaphragm up against the heart and throwing the heart forward and outward. This condition can easily be visualized by the fluoroscope and recorded by the X-ray. Under this condition the heart is pressed against the ribs which procedure is painful. There is no reason why asthma should not

possibly co-exist with any other disease, be the disease an affection of the heart, or of the kidneys, or of any other organ. We are no more justified in calling, in a specific case, the asthma heart asthma, or kidney asthma, than we would be justified in calling the asthma thyroid asthma, if the thyroid happened to be affected at the same time.

The co-existence of other affections besides the asthma does not permit us to associate them as interdependent on each other. In my experience there is but one asthma and this is bronchial asthma, and the bronchial asthma has the gastro-intestinal conditions, mentioned before as the etiologic factor.

The foregoing discussion applies to the etiology of the asthmatic constitution. The asthmatic attack, the asthmatic spasm may be initiated by many other agencies. It is this fact which has been misleading the profession heretofore. The asthmatic constitution is the offspring of a pathologic condition of the gastro-intestinal tract. Given this underlying condition and different irritants may bring on the spell of asthma. In the one case the inhalation of pollen, in another the emanations of some animal, which is especially irritating to that individual; in another an excitement or some other psychically violent circumstances. Thus we must distinguish the asthmatic constitution from the asthmatic spell.

SYMPTOMS

The symptoms of the asthmatic constitution can be summarized under the heading of gastro-intestinal pneumatosis. Pneumatosis not only has a set of symptoms of its own, but so far has proved the greatest stumbling block in our divine science in the matter of diagnosis. Pneumatosis means gas distention. Therefore, it means that the stomach and the intestines are distended. A distended gastro-intestinal canal reacts both on itself and upon the circumjacent adjacent structures. In reacting upon itself it is bound to produce an effect which must be contrary to the one which a contracted canal will produce. The two symptoms which are the result of muscular contraction and which are mainly in the minds of the patients are, appetite and peristalsis. I have repeatedly discussed the question of appetite,* and have maintained that appetite is the result of muscular contraction. This has been proved by Cannon and published by him seven years later, which publication has caused other physiologists to study the same question with like result.

Since appetite is something which concerns everyone, it will be worth repeating that appetite is a sensation which is the result of muscular contraction of the pyloric region, or of the duodenum, or of both. (In parenthesis I should

like to ask the physiologists who do mention my name not to quote me as saying the very contrary of what I actually did say, as did Carlson.) In the absence of contraction, *i. e.* in relaxation and in distention there is no appetite. Movements of the bowels are caused by the peristaltic action of the intestinal muscularis. As peristaltic action is synonymous with contraction of the muscularis, the distention of the muscularis, which is the opposite of contraction, also has the opposite effect of peristalsis, *i. e.* no peristalsis, therefore no passage, constipation.

The distention pressure against the adjacent organs and structures causes pain of greater or lesser degree and should not be interpreted as reflex pain. The pressure upward against the heart, which forces the heart upward, forward and outward, interferes with the heart's action. The patient becomes conscious of the pulsations of his heart, and as the heart has to beat against an obstruction the pulsations become distressing and painful. The dislocation of the heart necessarily impinges upon the normal excursions of the left lung and the respiration on the left side also becomes painful. The distention of the stomach is felt by the patient as bloating, fullness, or weight, and the escape of the gas through the mouth is responsible for the belching. The irritating gases reach the pharynx and cause constriction of the pharyngeal muscles, the gases cannot escape and accumulate behind the constriction until the muscle spasm ceases. This causes the patient to complain of choking, or of a lump in the throat. This, unfortunately, has been misinterpreted as the *globus hystericus*.

The distention of the intestines is felt by the patient as fullness or weight in the abdomen. Asthma does not set in suddenly; it begins with what is usually called dyspeptic symptoms. Perhaps a good rule would be to warn every patient who chronically complains of fullness after meals accompanied by shortness of breath, pain in the left side on inspiration, palpitation and difficulty in going uphill or up a flight of stairs, of the likelihood, that asthma may be developing. There may be supraorbital and frontal headache, or the patient may recall having had them years ago. Quite a frequent symptom is pain in the back of the head and in the nape of the neck. This latter is probably due to a mechanical cause of the nature of traumatism. During the violent spasms of coughing, the muscles of that region are violently, suddenly and sharply contracted. This exerts a violent pull upon where the muscles are inserted; this, I believe, is the cause of the pain in the nape of the neck. Very often the patients complain of buzzing in the ears. The appetite varies and may be even fair between the attacks. But during the time that the patient suffers from the asthma there is no appetite. There is palpitation, the patient cannot go upstairs, or uphill, he is short winded and does not dare undertake long walks, he tires

*Organacidia Gastrica, Medical Record, Sept. 6, 1902; Additional Notes, Philadelphia Medical Journal, March 28, 1903, and The Nature and Cause of Appetite Hunger and Anorexia, American Medicine, Aug. 26, 1905.

very easily and is incapable of any exertion. He gets up tired in the morning, even when he is free from attacks. He hates to go out alone for fear he may be seized with an attack on the way.

Constipation is the rule. This is a symptom which the physicians must be careful in eliciting. When the patient tells me that his bowels are good my next question is, "what do you take for them?" In the majority of cases the patient will then mention either the routine use of some drug or of such fruits which are known to produce movements. In the first years of asthma the patient may feel perfectly well between the attacks or during the non-asthmatic season. But later the patient is full of apprehension and fears to go out alone or any long distance. Coughing may be a prominent symptom; the dry, hacking, tiring cough. The patient usually dreams much, the dreams, as a rule, being quite unpleasant. As the disease wears on the patient becomes apathetic, especially so when he can get his sleep only in the sitting posture. Withal the patient need not look bad. Quite the contrary. Between the attacks the patient appears in perfect health, which deceives his family and friends.

The clinical appearance of an asthmatic attack can be summed up under the heading of air hunger and the violent, but ineffective attempt by the patient to remove an irritant, located somewhere in the chest. Quite often, the patient who has gone through many attacks, knows by certain prodromal symptoms, that an attack is coming and such premonitory sensations are peculiar to each individual. Usually, the patient goes to bed, perhaps even, in an exuberant frame of mind; he feels quite well and happy. But, somewhere, around two or three in the morning the patient begins to have difficulty in his breathing and begins to wheeze, of which the patient has only hearsay knowledge, as he himself is still asleep; he knows only what his family tells him. Quite suddenly he wakes up and throws himself into the characteristic asthmatic posture, which is one, most favorable to forced expiration. There is quite a similarity between this posture and the posture one assumes in defecation. In both instances one seeks expulsion, pent up air in the one and pent up fecal matter in the other. The patient sits in bed with legs flexed and thighs drawn towards the abdomen, while the trunk is inclined forward. The chin rests upon the hands and the elbows on the knees; the shoulders are raised and the head is fixed. In this position the patient labors with respiration. At intervals there is the cough, which continues in a somewhat staccato manner, beginning strong and loud and then diminishing in force with each successive concussion. The lips become cyanotic, the mouth is open and the eyes bulge out; the body is bathed in cold perspiration. Suddenly the patient jumps out of bed and runs to the open window gasping for air.

The behavior of those, who cannot sleep in bed, but take their sleep sitting up in a chair is somewhat different. When the asthmatic spasm seizes them, they get off the chair and brace against a piece of furniture with the entire body bent, or rather curved forward and the head thrown back. In either case the patient brings up a considerable quantity of mucus at the end of the attack and also gases are expelled. The attack may last only a short while or several hours. Some patients have only one attack in 24 hours, others have two or more.

Once more let us reflect upon the manifestation of an asthmatic seizure. This happens, as a rule, sometimes past midnight, around one or two o'clock in the morning, that is, about 7 or 8 hours after the last meal. At this time the ingested food is in the small intestine and has already undergone considerable chemical changes with the production of irritating volatile gases. But the production of such gases has not yet been completed; they are being constantly generated and forced upward by the normal contractions of the abdominal muscles, which at every contraction increase the intra-abdominal pressure. The noxious gases, reaching the pharynx cause violent and spastic contraction of its muscles and of the muscles forming the back of the tongue. The spastic contraction of these muscles seals the larynx and the esophagus and their irritation by the noxious chemicals provokes the effort to expel these by the violent act of coughing. All muscles of expiration are called into violent contractions because of which they gradually weaken. The more these muscles weaken, the more inadequate becomes the expulsive force and the greater become the efforts of the patient. These struggles exhaust the patient. As the expulsive force weakens the air cells are not only inadequately emptied, but are surcharged with CO₂ which incites still deeper inspirations, causing still greater distention of the air vesicles. Under these circumstances the cell walls weaken and lose their resiliency, which causes the dilatation of the air cells; in the course of time this dilatation becomes permanent. The enlargement of the chest and the bulging out of the intercostal spaces evidence the dilatation of the air cells.

Because of the enlargement of the air cells while the bronchioles retain their normal size, the relation in size between the bronchioles and the air cells changes, that is, the bronchioles are now relatively smaller. This has its effect upon the sound; air is forced from a wider space through a narrower space. This gives a higher pitched sound and, as this happens with the expulsion of the air from the lungs, we therefore hear these asthmatic râles in expiration.

DIAGNOSIS

The diagnosis of asthma is not always an easy matter. In my earlier experience I have sent patients away and told them, they had no

asthma, for which they came to consult me, because at the time of the consultation there was no evidence of asthma on auscultation. I have since learned this not to be the right practice. When a patient comes to consult about asthma, the presumption is very strong that he has asthma. If we hear no asthmatic râles at the time when the patient presents himself for examination it is because the patient happens to come during an interval. The interval between attacks may last only a few hours or it may last for days and weeks. It so happened that the patient came when his chest was free from râles and wheezing. The rule should be, that when a patient comes to consult about asthma, he should be treated for asthma, whether at the time there are asthmatic râles or not.

The diagnosis rests mainly on auscultation. Indeed, one need not even see or come near the patient. I can very often make the diagnosis of asthma by hearing the patient's breathing, when the patient is yet in the waiting room. It is the change of rhythm, which so characterizes asthma. It is the fully free inspiration followed by the deep, labored and prolonged expiration. One other condition gives that rhythm and this is pneumonia. But in pneumonia the respirations are increased in number, while in asthma they are not.

The patient should be stripped and set down in an easy position for the auscultation. We will hear that peculiar sound, known as wheezing. This is made up of dry râles of all sizes and of varying pitch. These sounds are heard in expiration. Should this position of the patient yield no auscultatory signs, then the patient is placed on his back and again examined and, should this position also prove negative then the examining chair is tilted to an angle of approximately 45 degrees, the patient's head being down and his legs up. It is remarkable how much this posture will bring out. I use this position not only for the examination of the chest, but also for the palpation of the abdomen, when it gives most excellent results. Again and again no other than the inclined position would bring out the asthmatic râles. It is also significant, that the asthmatic râles, if heard only in the inclined posture, are apt to be heard mostly, if not altogether, over the lower lobe of the right lung. This fact again seems to confirm my view, that asthma is due to pressure upward from the abdomen, as in the inclined position the abdominal viscera crowd against the diaphragm, and the heavy liver exerts its pressure against the right lower lobe of the lung.

On inspection we will find, that the chest is full, the intercostal spaces are filled out or bulging and that the supraclavicular fossae are prominent. For the inspection of the abdomen the patient is placed on his back. We now note, that there is a prominence over the region of the stomach and very often we will see here a wavy tremulation. This phenomenon is due to the

transmission of the pulsations of the abdominal aorta to the gas filled bowel and stomach.

In taking the history of the case we will always find, that the patient has had digestive troubles; he may have them at the time of the consultation, or has had them some time before and thought he was cured. In no case should the test meal examination be omitted. The test meal examination should be conducted with the object to attain practical, yet scientific facts. And for this purpose there is no better test, than the Ewald test breakfast. This consists of 35 grams of plain white bread, that is, bread made of white flour and water and of 300 c.c. of plain water. The patient should come to the physician's office fasting about 14 hours after he had had a full meal the evening before. The patient's fasting stomach is first examined by means of the stomach tube and the condition of the stomach is ascertained. After this the test breakfast is given him in the office of the physician and the patient waits in the waiting room for one hour. The patient should be perfectly quiet during this hour after which the stomach tube is again introduced. We will now find insufficiency of the pylorus, that is we will find no contents or perhaps only a trace. Fanciful modifications of the test meal have been devised, but they have proved good apparently only in the hands of the one who devised them.

PROGNOSIS

The prognosis in uncomplicated cases is most excellent irrespective of the length of time the asthmatic condition had continued. My youngest patient was six months old and my oldest 84 years and both got well. The baby's case would certainly dispel the belief, that asthma is of a nervous nature. *First*, because no one would care to impute nervousness to a 6 months' old nursing. And, *secondly*, I did not treat the baby, but treated the nursing mother. The child remains well and is now a little happy girl of over five years, whose grateful mother continues to send me asthmatic patients. The 84 year old patient had been suffering from asthma since he returned from the army in 1867. Not only do the patients get well, but they begin to feel better within 36 or 48 hours after treatment has been instituted. This often proves a drawback rather than a blessing for the following reason. Emboldened by the rapid turn for the better, the patient soon begins to experiment with the diet which was forbidden him. I have very numerous instances of this occurrence.

The physician must always have in mind, that the patient is very apt to eat and drink, what he should not. If after the patient had begun to feel better and kept on feeling better for the first 10 or 12 days and then begins to complain, the suspicion is, that he disobeys. Patients, who for months had been obliged to sleep in chairs can go to bed after a few days of treatment. How encouraging is this to the patient! The

attacks begin to lessen in severity and frequency right from the beginning of the treatment. But the physician must tell the patient the exact truth, that the patient must expect more spasms, which will gradually disappear. Otherwise a recurrent attack, no matter how mild and of how short a duration will have a depressing effect upon the patient.

The greatest patience and perseverance is required of both the patient and physician; the patient always needs encouragement. The physician must be steadfast in his positive promise of cure. The treatment requires on an average four months. The word cure must be used in asthma in the same sense as it is used in every other curable disease. Pneumonia is curable, so is pleurisy, so is measles, so is scarlet fever. Will the patient, once cured of these diseases ever get them again? Of course, they may get them again. Should this knowledge stop us from treating these diseases? We all wish, that when we once went through one disease, we should never get this disease again; but it remains only a wish. So it is with asthma. If a patient gets cured of asthma he also may get it again. But there is this difference between asthma and the other curable diseases: one can never tell when he may again fall victim to pneumonia or pleurisy. But the patient who gets asthma after he once was cured, has himself to blame. The asthmatic patient is told and knows what is going to provoke asthma. And if, in spite of this knowledge he nevertheless continues to abuse himself, whose fault is it?

But the rule is, that after the patient had experimented a few times and got some slight attacks he complies with the few restrictions in his diet and remains well. Asthma is absolutely curable, but the patient may get asthma again, if he so chooses. The patient is taught to know his enemy. If notwithstanding this he nevertheless disobeys and again knowingly contracts the same gastric condition which originally brought on asthma, whose fault is it, that he has again to suffer?

Perhaps an illustration will not be out of place. Some years ago a patient came to me from Arizona and was cured. Months after his cure I was called in haste to see him in his hotel. I found him suffering severely and asked him what happened. Between gasps for air he told me not to mind anything, but make him better. He was well again in two days and he then told me the following. He had come to New York on an important deal. "I had to go out with the boys," he said, "and eat and drink with them. I knew I was going to get asthma and I took the asthma as part of the deal. I knew that you were here and that I will get well." Now this is exactly the frame of mind the patient wants to be put in. What a difference between the patient believing himself lost, incurable and doomed for life and the patient's taking another attack merely in the same light as contracting an at-

tack of tonsilitis or some similar slight indisposition.

Once the patient has been cured he knows what struck him, if he again gets an attack. But, as a rule the patient can and will ward off the actual attack; he knows the premonitory symptoms. He knows where he has transgressed and he will correct himself before the real attack would come. Of this I have many instances. After the patient has remained well for a certain time he will long for and eat some of the forbidden food. For a little while he will feel no distress. Encouraged by this result he eats more and will have to pay the penalty. Of all these possible happenings the patient should be forewarned.

Where complications exist the cure will be influenced by the complication. Especially distressing is a complicating emphysema, which is of frequent occurrence.

TREATMENT

For the treatment of the paroxysm a long list of medicines has been tried and recommended. They accomplish nothing more than a temporary amelioration of the spasm, they do not cure. But the patient, once used to it, will abstain from the use of his specific drug with difficulty. The quickest relief is given by the hypodermic use of adrenalin. But in mentioning this I warn against its use. A patient of mine had used an ounce bottle in 24 hours. Also, I have seen one fatal result. The inhalations of the fumes of nitre paper or of stramonium leaves are not so dangerous as is adrenalin. The stramonium leaves are used either as a powder, the leaves being pulverized, or in the form of cigarettes, which are smoked by the patient. The nitre paper is made by saturating blotting paper in a saturated solution of potassium nitrate and then drying the paper. Also chloroform inhalations are used and amyl nitrite. However, the most commonly used drug by the physician is the hypodermic injection of morphine. This may or may not relieve the spasm; as a rule it does. A patient of mine had used before I began treating her one and a half grains of morphine at a dose which she injected herself. I took the bottle of morphine away from her and she refrained from the use of morphine afterward. I never use or advise any of the drugs here mentioned except the morphine or its equivalent, and this only in the treatment of an intercurrent bronchitis. In the treatment of asthma itself I never use any opiate.

Remembering that asthma has as its cause the insufficiency of the pylorus our efforts must be directed to the cure of this condition. Insufficiency of the pylorus demands alkaline treatment which is intended to aid the intestinal digestion. The alkalis have to be administered at a time when the chyme is out of the stomach. This is to be ascertained by the repeated examination of the test breakfast; that is, if the

patient has no contents in the stomach one hour after the test meal, the test is repeated the following day and the aspiration of the stomach is attempted one-quarter of an hour sooner. If then the stomach yields no contents, the test is again repeated the next day and the aspiration attempted again one-quarter of an hour sooner. In this way we acquaint ourselves with the precise time during which the stomach empties itself. The alkalies are to be given after the stomach had emptied itself so as not to interfere with whatever gastric digestion may yet be left.

Most often I use the bicarbonate of soda, the oxide of magnesia and the carbonate of calcium. But also the potassium carbonate and bicarbonate and the chloride of calcium may at times be found very useful, so also the chloride and carbonate of ammonium. The plain rhubarb and soda, nux vomica, strychnine, the mydriatics, cascara and the salicylate of soda are all drugs which may have to be combined with the alkalies. In many cases I add colchicum and strontium bromide to the alkalies.

Which combination and what doses are to be used is entirely a matter of each individual physician's experience. For the constipation, which is one of the commonest symptoms I have used for very many years the following combination: aloin and podophylline, of each $\frac{1}{4}$ grain, phenolphthalein from one to one and a half grain and atropin one hundred and twentieth of a grain at a dose, to be made into pills of which one pill is to be taken every night. Also potassium iodide and ammonium iodide may have to be used to loosen the mucus. Of these two I prefer the ammonium iodide. Of the saturated solution we start with a few drops well diluted in water and bring it up to the point of tolerance.

DIETETICS

Of most importance in the treatment of asthma is the diet. Unfortunately no set rule can be laid down which would apply in every case. Each case must be studied individually. The following principle should guide us in the selection of the food. No acids, no gas containing or gas forming foods or drinks, no spices, no tea, no coffee and no yeast containing beverages. We must bear in mind that each nationality, nay, each locality has its own foods and its own food combinations and its own kind of dishes to which the inhabitants of this special locality have been used and which they do prefer. What may be a highly prized delicacy in one locality may be looked upon with great disfavor in another.

My procedure is the following: I have the patient submit to me a list of the food which he usually takes and I then go over with him each article and make such changes or erasures as seem to me indicated. In this way the patient gets a diet list to which he has been used and which he likes. Neither vegetables nor cereals

are tolerated at first and should not be allowed for several weeks, until the patient's case is well in hand. The same holds good with regard to meats. One soon finds out that meat is not always meat. That is, that there is a difference in the various kinds of meat, and in the various cuts of meat. Some patients get along best on beef while others require lamb; some eat chicken without any harm and others veal. No uniform rule can be applied. The meat which is doing good to one may have violent effects on the other. Our experience is the only guide. Foods rich in starches should not be given for a long time. After five or six weeks treatment we may begin gradually with cereals, vegetables and fruits. I proceed in the following way: I allow one cereal one day and then the patient is not to have any cereals for two days after this. If there is no bad effect upon the patient within this time, then the patient is allowed to have it again. The same way I proceed with the vegetables and fruits. Only one kind is permitted at a time and then there is a rest of two days between, so that the effect may be watched. The vegetables should always be cooked and the fruit should be taken raw. However, the physician must be on his guard. The patients, eager to have fruits or vegetables, may report that the eating had no effect upon them, and in their anxiety to have them will withhold from the physician the fact that they had distress. After a few days they will begin to complain of the distress and will insist that the fruit or the vegetable, as the case may be, was not the thing that has harmed them. The physician should not mind this but stop the fruit or the vegetable which he suspects.

At the beginning of the treatment the following should not be allowed: Tea, coffee, cocoa, beer, wine, fruits, acid foods and salads, oat meal, graham bread, whole wheat bread, shredded wheat and other cereals, all fats except moderate quantities of sweet butter and olive oil, beans, peas, cabbages, radishes, onions. Salt should not be permitted. Instead of the common salt the sodium bromide may be given to be used the same as the common salt, *i. e.*, without regard to any dose.

The patient should not go to bed early. It is best that he go to bed about midnight. The reason for this is that if he goes to bed, say about 9 and then wakes about 2 or 3 in the morning, he may stay awake for a few hours, which has a very depressing influence upon the patient. The patient fails to note that he has already slept 5 or 6 hours. In most instances the patients get up in the morning with a spell of coughing. This I believe to be due to the fact that the mucus accumulates in the esophagus while the patient is in the recumbent position, instead of going downward into the stomach or being cleared by the patient, as it would naturally do when he is about. Taking one or two cups of hot water just before

going to bed will greatly alleviate this distressing symptom.

SUMMARY

There exists but one kind of asthma: bronchial asthma. The fact that diseases of other organs co-exist with asthma establishes no causative relation between such other diseases and asthma. The nature of asthma does neither preclude nor forbid the presence of diseases of other organs. No proof has ever been adduced, nor can there be adduced, that the asthmatic spasm is due to spasm of the bronchial tubes. The proper interpretation of the physical signs in a paroxysm

makes such an assumption impossible. Asthma must be recognized as the pulmonic symptom of a gastro-intestinal condition and, while various causes may provoke an asthmatic spasm, the cure of them depends solely upon our ability to cure the gastro-intestinal condition. Neither climatic, nor atmospheric conditions or changes cause asthma, but they do exercise some influence in the progress of the cure. Asthma is not confined to either sex or age; male and female, young and old suffer alike. The prognosis in uncomplicated asthma is excellent. Asthma is curable in about four months.

NEWS NOTES OF OHIO

Painesville—Dr. E. S. Jones recently took a special course in tuberculosis under the direction of United States Public Health Service at Cincinnati. Dr. Jones has been connected with the service at Painesville since his discharge from the army.

Tiffin—Dr. Marion W. Uberroth attended the alumni reunion of the medical department of the University of Maryland of which he is a graduate, in Baltimore, May 30-June 2.

Bucyrus—The body of Dr. William C. Gates, local physician who died at Vichy, France, while in the army hospital service after the close of the war, was brought to this country in May and interred at Arlington National Cemetery, Virginia.

West Liberty—Dr. and Mrs. Ben Leonard are visiting their daughter in England. Their travels will also take them to Belgium and France, where Dr. Leonard will attend clinics.

Cincinnati—At a recent meeting of the American Sanatorium Association, Dr. Charles Rockhill was appointed a member of a committee of three which will report to the National Tuberculosis Association on regulations for reading X-ray plates in the diagnosis of tuberculosis.

Fremont—Dr. Clarence I. Kuntz, secretary of the Sandusky County Medical Society, has announced that he will hereafter limit his practice to surgery and consultation.

Celina—Contracts have been let by Dr. John T. Gibbons for the erection of a modern ten-room physicians' office building.

Mt. Vernon—Dr. J. D. Thomas, formerly connected with the State Tuberculosis Sanatorium, is engaged in a special training course at Washington for the position of government rating official, on the completion of which he expects to be located in Cincinnati as an attache of the War Risk Insurance Bureau

Cincinnati—Drs. F. J. Sauer and Henry Freiberg have resigned as house surgeon and resident surgeon, respectively, at the General Hospital. The former will locate in California, and the latter will open offices here after completing a post-graduate course at Johns Hopkins.

Pemberville—Dr. C. C. Greiner is recovering from painful injuries received when his left eye was struck by a ball while watching a ball game in Toledo.

Cincinnati—The Eclectic Medical College has conferred upon Professor John Uri Lloyd the honorary degree of Doctor of Medicine in appreciation of his 40 years' association with the school. For 20 years Professor Lloyd served as professor of chemistry, and during the last 20 years has been professor emeritus and a member of the board of trustees.

Dayton—Among applicants for diplomatic posts, press notes have included the name of Dr. J. Morton Howells of this city, as a candidate for consul-general at Cairo, Egypt.

Columbus—The marriage of Dr. Wells Teachnor, Jr., and Miss Marguerite Putnam was solemnized June 2.

Bellefontaine—Dr. and Mrs. Robert Pratt and child are in France for a visit with Mrs. Pratt's relatives. They will be abroad from four to six months, part of which time Dr. Pratt will spend at the clinics of Strasburg and Berne.

Columbus—While on the Pacific coast recently, Dr. G. T. Harding delivered the commencement address at Loma Linda Medical College, Los Angeles, and also spoke before the local medical society.

Portsmouth—Dr. Frank Williams has gone to Transcaucasia and Asia Minor as a member of the Near East Relief to assist in caring for Armenian orphans who are wards of American charity. Dr. Williams returned to America some time ago after 18 months' relief service in Palestine.

Cleveland—Dr. A. J. Lanza on July 1st assumed a new position with the Ministry of Health, Melbourne, Australia, where he will remain for the next two years.

Study the New Law Extending the Benefits of Workmen's Compensation to Occupational Diseases, Soon to Become Effective in Ohio

At the time this issue of *The Journal* went to press plans for the administration of the new law including occupational diseases under the benefits of the Workmen's Compensation Act had not been completed by the Industrial Commission. Members of the State Association are undoubtedly familiar with the history of this measure as it has been presented from month to month in previous numbers. Briefly, it is as follows:

Known as House Bill No. 47, the bill was introduced in the last session of the legislature on January 18 by Representative Wenner of Ashabula County. It passed the House and Senate by votes of 109 to 1 and 36 to 0, respectively; was signed by the governor May 5, and is scheduled to become effective August 5.

There has been very general sentiment in favor of the principle of compensating workmen who contract "occupational diseases in the course of employment," which indicated in advance of the legislative session that there would be an enactment for its provision. Such a proposal was endorsed in the pre-election platforms of both political parties and in the inaugural address of Governor Davis and in expressions of other political leaders.

While the measure was under consideration by the Labor Committee the State Medical Association united with other groups directly affected, to safeguard it from indefiniteness and generalities which would have made the administration of the law the subject of unlimited controversy. It will be the purpose of the State Association to keep in constant touch and cooperate with the Industrial Commission on plans for the operation of the law and when such plans have been completed they will be published as early as possible in *The Journal*.

Meanwhile, physicians will do well to familiarize themselves with the provisions of the new law itself. It provides for the amendment of Sections 1465-46, 1465-56, 1465-91, 1465-103, relating to workmen's compensation, and 6330-1, relating to occupational diseases; and the addition of Sections 1465-53a, 1465-68a, 1465-68b, 1465-68c, 1465-69a, 1465-72b and 1465-99a. In the following paragraphs these sections are taken up in the order in which they appear above. New sections are printed in full and changes in amended sections are briefly explained and printed in italics.

Section 1465-46, amended by the new law, concerns the annual report which every employer of the state, employing five or more employees regularly in the same business or in or about the same establishment, is required to make to the

Industrial Commission in January of each year, giving the number of persons employed at each kind of employment and the aggregate amount of wages paid to such employees. As in the old section, the amended one states that the information contained in these reports is not open to the public nor available in court proceedings unless the Commission is a party to such action; that the information may, however, be tabulated and published as statistics for the use of other state departments and the public. The old section provided a penalty from \$100.00 to \$500.00 for any person in the employ of the Commission who divulged any information secured by him "in respect to the transactions, property or business of any company, firm, corporation, person, association, co-partnership or public utility to any person other than members of the commission." The amended section increases the maximum penalty to \$1000.00 for any person who divulges information "in respect to the transactions, property, *business or mechanical, chemical or other industrial processes*, of any company," etc.

Section 1465-53a provides that "the Industrial Commission of Ohio on and after July 1, 1921, shall fix such rates of premium for all occupations and industries based upon the total payroll of each of said occupations and industries as will provide an adequate fund for the compensation provided by law on account of occupational disease, and maintain a state occupational disease fund until July 1, 1924.

"The Industrial Commission of Ohio shall investigate and ascertain the hazard of the diseases specified in Section 1465-68a of the General Code, in occupations or industries and, on and after July 1, 1924, shall classify occupations or industries according to the degree of such hazard and fix such rates of hazard premium of the risks of the same, based upon the total payroll in each of said classes as will provide an adequate fund for the payment of the compensation provided by law on account of such diseases, and maintain a state occupational disease fund from year to year.

"Ten per cent. of the money that shall be paid into the occupational disease fund on and after July 1, 1921, shall be set aside for the creation of a surplus until such surplus shall amount to the sum of two hundred and fifty thousand dollars, after which time, whenever necessary in the judgment of the Industrial Commission to guarantee a solvent occupational disease fund, a sum not to exceed five per cent. of all the money paid into the occupational disease fund shall be credited to such surplus fund.

"In order to determine properly such classifica-

cation the Commission shall collect and collate information with respect to such diseases, and shall obtain statistical, actuarial and such other information as may be necessary to effect the purposes of this section, including the study of the experience of other states and countries having similar laws compensating the victims of occupational diseases. The Commission shall employ and detail to such work such physicians, examiners, clerks and assistants as shall be necessary.

"In connection with, and as a part of, such investigation, the Industrial Commission may from time to time publish such conclusions as it may reach as to the causes and prevention of occupational diseases."

Section 1465-56 is amended by adding to the sentence stating that "The treasurer of state shall be the custodian of the state insurance fund," the words "*and the occupational disease fund.*" Where the old section spoke of the preparation of vouchers for payment of compensation to "injured and the dependents of killed employes," this amended section substitutes "*to the person or persons entitled thereto under the provisions of this act.*"

Section 1465-68a provides that "Every employe who is disabled because of the contraction of an occupational disease as herein defined, or the dependents of an employe whose death is caused by an occupational disease as herein defined, shall, on and after July 1st, 1921, be entitled to the compensation provided by sections 1465-78 to 1465-87, inclusive, and section 1465-89 of the General Code, subject to the modifications hereinafter mentioned; provided that no person shall be entitled to such compensation unless for ninety days next preceding the filing of a claim for compensation the employe has been a resident of the State of Ohio, or for ninety days next preceding the filing of a claim for compensation has been employed by an employer required by the workmen's compensation law of Ohio to contribute to the occupational disease fund of Ohio for the benefit of such employe, or to compensate such employe directly under the provisions of Section 1465-69 of the General Code.

"The following diseases shall be considered occupational diseases and compensable as such, when contracted by an employe in the course of his employment in which such employe was engaged at any time within twelve months previous to the date of his disablement and due to the nature of any process described herein.

SCHEDULE

Description of Disease or Injury	Description of Process
1. Anthrax	Handling of wool, hair bristles, hides and skins.
2. Glanders	Care of any equine animal suffering from glanders; handling carcass of such animal.

3. Lead poisoning	Any industrial process involving the use of lead or its preparation or compounds.
4. Mercury poisoning	Any industrial process involving the use of mercury or its preparations or compounds.
5. Phosphorus poisoning	Any industrial process involving the use of phosphorus or its preparations or compounds.
6. Arsenic poisoning	Any industrial process involving the use of arsenic or its preparations or compounds.
7. Poisoning by benzol or by nitro and amid o-derivatives of benzol (dinitrobenzol, anilin and others)	Any industrial process involving the use of benzol or a nitro- or amido-derivative of benzol or its preparations or compounds.
8. Poisoning by gasoline, benzine, naphtha, or other volatile petroleum products	Any industrial process involving the use of gasoline, benzine, naphtha, or other volatile petroleum products.
9. Poisoning by carbon bisulphide	Any industrial process involving the use of carbon bisulphide or its preparations or compounds.
10. Poisoning by wood alcohol or inflammation	Any industrial process involving the use of wood alcohol or its preparations.
11. Infection of the skin on contact surfaces due to oils, cutting compounds or lubricants, dust, liquids, fumes, gases or vapors	Any industrial process involving the handling or use of oils, cutting compounds or lubricants, or involving contact with dust, liquids, fumes, gases or vapors.
12. Epithelioma, cancer or ulceration of the skin or of the corneal surface of the eye due to carbon, pitch, tar or tarry compounds	Handling or industrial use of carbon, pitch or tarry compounds.
13. Compressed air illness	Any industrial process carried on in compressed air.
14. Carbon dioxide poisoning	Any process involving the evolution or resulting in the escape of carbon dioxide.
15. Brass and zinc poisoning	Any process involving the manufacture, founding or refining of brass or the melting or smelting of zinc.

Section 1465-68b states that "Every employe mentioned in the next preceding section and the dependent or dependents of such employe and the employer or employers of such employe shall be entitled to all the rights, benefits and immunities and shall be subject to all the liabilities, penalties and regulations provided for injured employes and their employers by Sections 1465-44 to 1465-108,⁽¹⁾ General Code, inclusive, save and except Section 1465-90,⁽²⁾ General Code, which shall not apply to any case involving occupational disease, and also subject to such other modifications or exemptions hereinafter provided.

"The Industrial Commission shall have all of

1. Governing right of benefits of compensation from the state insurance fund.
2. Giving the Commission power to determine all questions within its jurisdiction and declaring its decision thereon final; and providing for appeal of cases to court in event final action of Commission denies right of claimant to participate in state insurance fund on ground that injury was self-inflicted or on ground that accident did not arise in course of employment, etc.

the powers, authority and duties with respect to the collection, administration and disbursement of the state occupational disease fund as are provided for in Sections 1465-44 to 1465-108, General Code, inclusive, providing for the collection, administration and disbursement of the state insurance fund for the compensation of injured employees.

Section 1465-68c provides that "No compensation shall be awarded on account of disability or death from disease suffered by an employee who, at the time of entering into the employment from which the disease is claimed to have resulted, shall have wilfully and falsely represented himself as not having previously suffered from such disease. Compensation shall not be awarded on account of both injury and disease, except when the disability is caused by such disease and an injury, in which event the Commission may apportion the payment of compensation provided for in Section 1465-79 to 1465-82, General Code, inclusive, between the funds as in their judgment seems just and proper. If an employee is suffering from both occupational disease and an injury, and the Industrial Commission of Ohio can determine which is causing his disability, it shall pay compensation therefore from the proper fund."

Section 1465-69a provides that "Every person, firm, or corporation, who is an employer within the meaning of this act shall, in the month of July, 1921, and semi-annually thereafter, pay into the occupational disease fund for the compensation of occupational diseases the amount of premium determined and fixed by the Industrial Commission of Ohio; and in the month of July, 1924, and semi-annually thereafter, shall pay into the occupational disease fund for the compensation of occupational diseases such amount of premium as shall be fixed and determined by the Industrial Commission of Ohio, for the occupation or employment of such employer, according to the classifications, rules and rates made and published by said Commission; and such employer shall semi-annually thereafter pay such further sum of money into the occupational disease fund as may be ascertained to be due from him by applying the rules of said Commission, and a receipt or certificate that such payment has been made shall immediately be mailed to such employer by the Industrial Commission of Ohio, which receipt or certificate, attested by the seal of said Commission shall be prima facie evidence of the payment of such premium.

"Provided that all employers who become subscribers to the occupational disease fund for the compensation of occupational diseases after July 1, 1921, shall make such semi-annual payments on the dates on which such employers become subscribers to the occupational disease fund for the compensation of occupational diseases and thereafter upon the expiration of the respective

periods for which payments into the fund have been made by them.

"And provided that such employers who desire to pay individually the compensation on account of occupational diseases of their employes upon the terms and conditions provided in Section 1465-69, General Code, may pay such compensation upon compliance with and satisfaction of all the terms and conditions of said section. Except in lieu of the payments required to be paid into the surplus of the state insurance fund by said section, such employer shall pay into the occupational disease fund such amount or amounts as are required to be credited to the surplus of such fund as provided in Section 1465-53a, General Code. Such employers as are permitted to pay such compensation individually shall be entitled to all the benefits and immunities and subject to all of the liabilities and penalties to which employers are entitled or subjected under the workmen's compensation law of the State of Ohio, who elect to pay directly the compensation of injured employes under the provisions of Section 1465-69, General Code, except as herein provided."

Section 1465-72b provides that "In all cases of occupational disease, or death resulting from occupational disease, claims for compensation shall be forever barred, unless, within two months after the disability due to the disease began, application shall be made to the Industrial Commission of Ohio, or to the employer in the event such employer has elected to pay compensation direct, except in such cases as are provided for in Section 1465-82, Sub-division 4, General Code."

Section 1465-91 is amended in the new law by addition of the words printed in italics, making the entire section read as follows: "Such Commission shall not be bound by the usual common law or statutory rules of evidence or by any technical or formal rules or procedure, other than as herein provided; but may make the investigation in such manner as in its judgment is best calculated to ascertain the substantial rights of the parties and to carry out justly the spirit of this act, *provided that no compensation shall be paid to any claimant on account of any occupational diseases, the existence of which is denied, unless a medical advisor appointed by the Commission shall have examined such claimant for the purpose of determining the existence of such disease, and the approximate time, place and cause of its inception; and when an employe is claimed to have died from an occupational disease, no award shall be paid to the dependents of such deceased person until a medical advisor appointed by the Commission shall have had up-*

³1465-82, Subdivision 4. In cases in which compensation on account of the injury has been continuous to the time of the death of the injured person, and the death is the result of such original injury, compensation shall be paid for such death as though same had occurred within the two years hereinbefore provided, deducting from the final award therefor the total amount theretofore paid on account of total or partial disability on account of such injury.

portunity to examine the body of such deceased person for the purpose of determining the cause of death."

Section 1465-99a is of special importance to physicians as it requires them to report to the Industrial Commission every case of occupational disease enumerated in the law, diagnosed by them, within twenty-four hours of such diagnosis. This report is in addition to the claim report, which will be filed with the Industrial Commission when compensation for contraction of an occupational disease is sought; and in addition to the reporting of occupational diseases to the State Department of Health as already required by law. Specifically this section states: "Every physician in this state attending on or called in to visit a patient whom he believes to be suffering from an occupational disease as defined in this act shall, within forty-eight hours from the time of making such diagnosis, send to the Industrial Commission of Ohio a report stating: (a) name, address and occupation of patient; (b) name and address of business employed; (c) nature of disease; (d) name and address of employer of patient; (e) such other information as may be reasonably required by the Industrial Commission of Ohio.

"The reports herein required shall be made on blanks to be furnished by the Industrial Commission of Ohio. The mailing of the report within the time stated in a stamped envelope addressed to the office of the Industrial Commission of Ohio shall be a compliance with this section.

"Reports made under this section shall not be evidence of the facts therein stated in any action arising out of a disease therein reported.

"It shall be the duty of the Industrial Commission of Ohio within twenty-four hours after the receipt of such report to send a copy thereof to the employer of the patient named in the report.

"Whoever being a physician practicing in the State of Ohio neglects or refuses to make and transmit to the Industrial Commission of Ohio the report provided for in this section shall be fined not to exceed one hundred dollars or imprisoned for not to exceed ninety days, or both, but no person shall be imprisoned under this section for a first offense, and the prosecution shall always be as and for a first offense unless the affidavit upon which the prosecution is instituted contains the allegation that the offense is a second or repeated offense. The Industrial Commission of Ohio is directed to enforce the penal provisions of this section."

Section 1465-103 pertains to the annual report of accidents, causes, awards, and condition of the funds which the Industrial Commission is required to make at the end of each fiscal year. This section is amended in the new law to include in this report "a general statement of the causes of occupational diseases for which awards were made." The amended section further states that the Commission may in such report, "bring to the

attention of the governor such diseases arising out of and due to industrial processes as it believes should be made compensable as occupational diseases." The collation of general information as to the business transacted by the Commission for distribution to employers and employees, which was mandatory in the old section, is optional in the new.

Section 6330-1 covers the general duties of employers. Whereas, this section formerly required every employer to provide "reasonably effective devices, means and methods to prevent the contraction by his employees of illness or disease incident to the work or process in which such employees are engaged," the amended section states that the employer must provide such protection for this purpose "as shall be prescribed by the Industrial Commission of Ohio."

Small Advertisements of Interest

Wanted—To do relief work for physician who wishes to be absent on vacation, post-graduate work, etc. Retired at present. Have had 18 years' general practice. Best of reference. Address E. E., care *The Journal*.

Lost or Stolen—Liberal reward; no questions asked for return of suitcase taken from in front Hotel Secor, Toledo, Ohio, May 26. Contained salesman's supplies and stock; 200 ampules Neo-Salvarsan, Metz; some novocain; 20 doz. Hypodermic needles, (B. D.); 46 Stethoscopes, (Perfecto); Luer Syringes; also important papers. Any information will be appreciated. Address, A. D., *Ohio State Medical Journal*.

Location for Physician—Good rural and suburban practice will be turned over to the purchaser of my home and office combined. Equipped with gas and electricity; large and beautiful yard with modern garage and fine garden. All paved roads, good schools, level country, no competition. Hospital close at hand. Electric and steam railroads. Address, L. M., care *The Journal*.

Wanted Location—Will pay cash for good, general practice, either opposed or unopposed, with or without real estate. Address W. B., care *The Journal*.

Ohio's Medical Regiment

The Ohio National Guard now has a medical regiment, replacing the former system of uncorrelated "sanitary" units. The regiment is composed of a headquarters detachment, a supply section, a laboratory section, two ambulance companies, a sanitary company, a veterinary company and a hospital company.

Dr. H. H. Snively is the commanding officer of the regiment and other staff officers are: Dr. Harry D. Jackson, Circleville, lieutenant-colonel; Howard E. Boucher and Harry W. Brown, Columbus, majors. The latter is the official veterinary staff member.



Above are shown the five new members of Council of the State Association who were elected and assumed office at the seventy-fifth annual meeting in Columbus. They are: (1) Dr. C. W. Waggoner, Toledo, councilor Fourth District; (2) Dr. W. D. Haines, Cincinnati, councilor First District, succeeding Dr. Robert Carothers, the president-elect; (3) Dr. E. R. Brush, Zanesville, councilor Eighth District; (4) Dr. D. W. Stevenson, Akron, councilor Sixth District; and (5) Dr. M. F. Hussey, Sidney, councilor Second District.

OHIO PUBLIC HEALTH NOTES

—New health regulations compelling dealers in articles that come in contact with the face, to use special samples for demonstrating and to keep their stocks disinfected, were placed in effect in Cleveland, June 1, and their enforcement is being urged by the retail merchants' board. The orders govern the sale of toy balloons, whistles, mouth organs, horns, face veils, tooth-brushes, pipes, cigarette and cigar holders and nursing bottles.

—In view of the fact that work in the four nutrition classes conducted in the Dayton schools during the past semester was highly successful and considered deserving of wider scope, it is probable that the corps of nurses for this work will be increased from three to eight at the regular reopening of school.

—Ohio is the only state in the Union where prisoners from a state institution are used in nursing. Attention was directed to this fact by the action of the General Assembly in appropriating \$25,000 for the erection at the Sandusky Soldiers' Home of a model home for boys from the Mansfield Reformatory who are engaged in nursing at the Sandusky hospital.

—At a clinic conducted in Portsmouth in May by the United States Public Health Service in conjunction with the state and local health departments, the local Red Cross and county medical society, over 80 persons were examined for trachoma. Some of the patients had been examined in the schools previously but a good number were adults presenting long continued cases of trachoma. Eighteen patients were operated on for the disease.

—At a recent meeting of the Parent-Teacher Association in Mt. Vernon addresses by Dr. F. G. Boudreau of the State Health Department and Dr. I. S. Workman, local health commissioner, were followed by the adoption of resolutions indorsing health supervision and recommending the employment of a full-time public health nurse for the schools.

—Five members of the Cleveland Academy of Medicine have been appointed to constitute a tuberculosis commission, which will undertake to correlate all tuberculosis activities in the city and carry out the recommendations of the Cleveland Health and Hospital Survey in regard to tuberculosis. The commission consists of Drs. R. H. Bishop, Jr., H. L. Rockwood, G. W. Moorehouse, J. C. Placak and H. V. Paryzek.

—According to Dr. H. S. Wingert, director of the Student Health Service at Ohio State University, students at the college have enjoyed bet-

ter health this year than during any other year in the history of his department. More than 10,000 visits were made to the department this year and there has been increased interest in disease prevention.

—The Cuyahoga County babies' dispensary auto clinic started its annual program, June 1, and during the three summer months will tour the county, stopping at the various centers of population for two-day periods. Babies are examined and cared for and mothers are given prenatal and child-care instruction.

—"The Deficient Child" was the subject of an address by Dr. E. A. Baber, superintendent of the Dayton State Hospital, before the eleventh annual convention of the Ohio Federation of Humane Societies which convened in Dayton recently.

—Stating his belief that the average practitioner has not the time to make complete diagnosis of a tubercular patient's case, Dr. C. O. Probst told members of the Columbus General Practitioners' Society at a meeting held in the Anti-Tuberculosis Dispensary, that he favors the establishment of a department of tuberculosis in connection with the medical college of Ohio State University.

—A two-day clinic for the examination of crippled children was held at Ohio Valley Hospital, Steubenville, June 2-3. Dr. Ralph Morrell, Youngstown, directed the work. A similar clinic was conducted at the Barney Community Center, Dayton, June 14, by Dr. B. G. Chollett, Toledo.

Conflicting Orders Increased Danger of Newark Smallpox Situation

When the prevalence of smallpox in Newark took an alarming jump from 35 cases in April to 198 in May the State Department of Health instituted an investigation which resulted in the finding of many mild cases among school children that were receiving no medical attention. Considering this an important factor in the spread of the disease the state commissioner of health recommended stringent measures to curb its progress.

The first recommendation was that the board of education should adopt a regulation providing for the exclusion from school of all unvaccinated children. This recommendation was approved by the city health commissioner and by him put in the form of a request to the board of education which promptly adopted the regulation.

The board of health then met and adopted a regulation providing for the closing of schools and other public gatherings and allowing supplementary assistance to the health commissioner. This action by the board of health would, of course, have nullified the regulation of the board of education requiring exclusion from school of the unvaccinated, and was taken at the instigation of members of various healing cults who are

opposed to vaccination and nearly all other legitimate medical procedures.

Physicians of the staff of the State Department of Health pointed out that closing the schools would be the best possible method of extending the spread of the disease, for the cases were mild and no physicians were called, hence the only way to locate the cases was through the schools. With the schools closed, a house-to-house canvass would have been necessary to locate the cases, and this would be very expensive and extremely time consuming. Members of the board of education objected to closing the schools, as a costly, wasteful and useless practice. The business men of the community became aroused and brought pressure to bear upon the board of health which soon rescinded its closing order.

The board of education thereupon repealed its resolution requiring the exclusion from school of unvaccinated children, because that resolution had been adopted on the request of the health commissioner and without the concurrence of the board of health, and proceeded to adopt another similar resolution on its own initiative.

Three physicians from the staff of the State Department of Health remained in Newark for a week, assisting the local health department in its work of smallpox prevention, and the situation is now under control. The moral of this occurrence, which caused Newark to receive much undesirable publicity because of the thoughtless action of the board of health, is that members of boards of health should be appointed because of their knowledge of and sympathy with modern public health procedures, and that it is costly and dangerous to neglect the lessons of smallpox prevention learned in the past.

Helpful Conferences of Health Commissioners

During the month of May, conferences of health commissioners were held at various points in the state. The first was held at Jackson on May 24 and included the health commissioners of ten counties and the cities within those counties. The conference was called for the purpose of forming an organization of health commissioners in that section of the state. Dr. J. S. Hunter, health commissioner of Jackson County general health district, was elected president, and Dr. R. W. DeCrow, health commissioner of Scioto County general health district, secretary. It was decided to meet at monthly or bi-monthly periods. The conference lasted for more than two hours and various topics of interest were discussed. Among those in attendance were representatives of the State Department of Health and the State Department of Public Instruction. The judge of the juvenile court of Jackson County was present as a guest and addressed the conference.

On May 26, a similar conference was held at Cambridge, for health commissioners in that sec-

tion of the state. Dr. J. B. Naylor, health commissioner of Morgan County general health district, was elected president, and Dr. W. P. Johnson, health commissioner of Monroe County general health district, secretary. The conference decided to meet monthly. The judge of the juvenile court was present, and the State Department of Health was represented by Mr. J. E. Bauman, Dr. F. G. Boudreau, and Miss Natalie Merrill.

A meeting of health commissioners was held in Cincinnati on June 10. Dr. C. A. Neal, health commissioner of Hamilton County general health district, was elected president, and Dr. H. H. Pansing, health commissioner of Montgomery County general health district, secretary. Retiring officers were Dr. R. H. Grube, president, and Dr. R. B. Tate, secretary.

June 15 was the date of a meeting of health commissioners of the northwestern section of the state held at Findlay, with Dr. J. J. Sutter, president, presiding. The meeting was called to order at 10:00 a. m., and a business session was held until noon. After luncheon, a large number of subjects were discussed by the various commissioners. This conference includes the health commissioners of northwestern Ohio with Lima as a center. Meetings are held monthly and are well attended.

On June 20, a meeting of health commissioners of northeastern Ohio was held at Cleveland in the office of Dr. Robert Lockhart, health commissioner of Cuyahoga County general health district. The president of this conference, Dr. C. M. Peters, of Stark County general health district, presided. The conference was addressed by Dr. R. G. Perkins, Professor of Preventive Medicine of Western Reserve University, on the sanitary survey being conducted in Cuyahoga County. Dr. W. A. McIntosh spoke on the establishment of laboratories in general health districts. Dr. F. G. Boudreau discussed the value of permanent child clinics to health departments.

A conference of health commissioners of the district around Franklin County will be held shortly at Columbus. Dr. C. M. Valentine is president and Dr. C. W. Hoopes, secretary, of this conference.

The organization of the state into conference districts is now complete, and every health commissioner receives invitations to attend a conference at least bi-monthly. These conferences have proved of great value, as they stimulate commissioners, the benefit from the exchange of experiences is mutual, and health procedures are standardized. They also enable representatives of the State Department of Health to meet and confer with health commissioners without waste of time. The conferences are under the direct control of the commissioners; the only conference controlled exclusively by the State Department being the annual conference provided for by law and held in Columbus.

Many Ohioans Attend Busy Session of A. M. A. in Boston

Famed for tea parties, beans and numerous other things, Boston has added to its laurels the distinction of entertaining on June 6-10 one of the most successful and notable annual meetings in the history of the American Medical Association. The meeting was the first to be held in that city in fifteen years. The attendance mark, 5,506, was the third largest the Association has yet registered.

There was unprecedented enthusiasm in the program. The scientific sections were, without exception, well attended, and the scientific exhibit, both in volume and quality, was excellent. The commercial exhibit was unusually attractive, stimulating and instructing, including displays of all the newer mechanical aids to diagnosis and medical practice. The entertainments were ideal and particularly appropriate to the historical interest attaching to Boston and its vicinity.

In no session in recent years have so many problems of vital importance to both the public and the medical profession been taken up as were considered by the House of Delegates this year. In this body Ohio was officially represented by Drs. J. H. J. Upham, Columbus; Ben R. McClellan, Xenia; G. E. Follansbee, Cleveland; Granville Warburton, Zanesville, and W. D. Haines of Cincinnati, all of whom took an active part in the deliberations. Dr. C. D. Selby, Toledo, the sixth Ohio delegate, was unable to be present.

This state received merited recognition in the selection of the personnel of the reference committees of the House of Delegates. Dr. Upham served as chairman of the Committees on Legislation and Public Relations, to which were referred many of the most important matters under consideration by the House, including Brigadier General Charles E. Sawyer's recommendations for the organization of a national department of public welfare; state medicine, the report of the Council on Health and Public Instruction, etc.

Dr. McClellan was a member of the Committee on Miscellaneous Business.

Dr. William C. Braisted, surgeon general of the United States Navy, closed his term as president at the Boston session and was succeeded by Dr. Hubert Work of Pueblo, Colorado, assistant post-master general of the United States. The new president-elect is Dr. George E. de Schweinitz of Philadelphia, an ex-president of the American Ophthalmological Society and a member of the American Philosophical Society and of the Academy of Natural Sciences, who served with the rank of colonel as consultant in ophthalmology in the Surgeon General's Office during the World War. St. Louis was chosen as the site of next year's meeting.

In a total registration of 5,506 members of the Association from all parts of this country, Hawaii,

Canal Zone, Philippine Islands, Porto Rico, and guests from foreign countries, there were 212 Ohioans whose names are given below:

Akron—C. W. Averell, E. L. Averell, L. E. Brown, C. B. Farr, W. A. Hoyt, J. G. Kramer, D. B. Lowe, J. S. Millard, J. E. Monnig, W. A. Parks, J. H. Weber. *Avon Lake*—F. H. McMechan. *Canton*—A. C. Brant, L. A. Buchman, A. H. Calhoun, J. P. DeWitt, E. M. Feiman, G. A. Kelley, F. G. King, L. E. Leavenworth, E. J. March, E. O. Morrom, H. P. Pomerene, H. M. Schuffel, R. T. Shipley, L. D. Stoner, H. Welland, G. F. Zinninger.

Camden—J. W. Coombs.

Centerville—C. D. Slagle.

Chillicothe—R. W. Holmes.

Cincinnati—H. W. Bettman, C. J. Broeman, R. B. Cofield, G. E. Dash, Bertha Dauch, A. H. Freiberg, A. Friedlander, O. P. Geier, Chas. Goosman, J. V. Greenbaum, W. R. Griess, W. D. Haines, C. E. Hauser, C. D. Heisel, L. G. Heyn, A. L. Knight, Mary S. Knight, F. H. Lamb, Karl F. Little, Wm. Mithoefer, Lydia L. Poage, H. T. Ratterman, Augustus Ravogli, E. O. Smith, C. T. Souther, Louis Southgate, M. Wallenstein, J. A. Watkins, J. H. Wilms, J. J. Winn.

Cleveland—W. J. Abbott, G. T. Bauman, S. L. Bernsetein, C. A. Black, M. A. Blankenhorn, M. H. Castle, W. B. Chamberlin, W. P. Chamberlain, H. N. Cole, W. T. Corlett, A. G. Cranch, G. W. Crile, C. L. Cummer, C. M. Davis, R. W. Elliott, F. W. D. Finke, J. E. Fisher, G. B. Fliedner, D. Folds, G. E. Follansbee, A. F. Furrer, Daniel Heimlich, A. H. Herr, J. M. Ingersoll, P. A. Jacobs, J. T. John, H. T. Karsner, S. A. Kelley, E. Klaus, J. J. Kurlander, F. G. Leonard, W. J. Manning, C. L. McDonald, E. P. McNamee, J. M. Moore, S. H. Monson, C. F. Nelson, B. H. Nichols, J. D. Osmond, John Phillips, C. E. Pitkin, E. A. Powell, D. A. Prendergast, W. J. Quigley, E. F. Romig, V. C. Rowland, J. P. Sawyer, A. G. Schlink, H. A. Schlink, W. D. Shackleton, H. G. Sloan, B. W. Spero, W. G. Stern, W. C. Stoner, A. Strauss, Lester Taylor, J. J. Thomas, J. E. Tuckerman, W. C. Tuckerman, W. H. Tuckerman, C. H. Verowitz, F. F. Walter, J. M. Waugh, I. I. Yoder.

Columbus—J. B. Alcorn, F. G. Boudreau, C. F. Bowen, I. A. Bradley, H. O. Bratton, J. E. Brown, C. F. Clark, J. J. Coons, J. D. Dunham, E. W. Euans, E. E. Gaver, A. M. Hauer, B. R. Kirken-dall, O. E. Kline, A. B. Landrum, Don K. Martin, C. W. McGavran, R. A. Ramsey, J. M. Rector, C. J. Shepard, C. M. Shepard, H. H. Snively, J. M. Thomas, J. H. J. Upham. *Conneaut*—E. S. Wright. *Coshocton*—E. M. Wright.

Dayton—L. G. Bowers, D. B. Conklin, H. V. Dutrow, G. B. Evans, N. D. Goodhue, H. C. Hanning, E. M. Huston, C. C. McLean, J. W. Millette,

E. W. Shank, W. S. Smith. *Fort Recovery*—W. C. Robeson. *Fremont*—C. I. Kuntz. *Hillsboro*—J. C. Larkin. *Hudson*—G. A. Miller. *Ironton*—C. A. Casey. *Lakewood*—O. L. Goehle, C. L. Graber, R. J. May. *Lisbon*—H. S. Maxwell. *Lorain*—O. B. Monosmith. *Marion*—D. W. Brickley, H. S. Rhu. *Massillon*—R. J. Pumphrey. *Miamisburg*—C. T. Hunt. *Montpelier*—J. A. Weitz. *Mt. Vernon*—V. L. Fisher. *New Holland*—J. B. May. *Oak Harbor*—F. S. Heller. *Palestine*—P. C. Hartford. *Sidney*—A. B. Gudenkauf. *Springfield*—J. A. Link, O. M. Marquart. *Steubenville*—J. C. M.

Floyd. *Tiffin*—P. J. Leahy, E. H. Porter. *Toledo*—J. M. Bessey, P. Bruce Brockway, S. D. Foster, S. D. Giffen, E. B. Gillette, Charles Harpster, E. I. McKesson, J. T. Murphy, G. M. Wright. *Uhrichsville*—Tracy Haverfield. *Van Wert*—L. E. Ladd. *Warren*—J. D. Knox, C. C. Waller. *Washington C. H.*—H. L. Stitt. *Wellsville*—A. B. Holland. *Wilmington*—E. C. Briggs. *Woodfield*—H. P. Gillespie. *Wooster*—J. J. Kinney. *Youngstown*—Sidney McCurdy. *Zanesville*—O. I. Dusthimer, Granville Warburton. *Xenia*—B. R. McClellan.

DEATHS IN OHIO

Charles D. Briner, M.D., Starling Medical College, Columbus, 1886; aged 59; member of the Ohio State Medical Association; died in a Columbus hospital, May 20, after a lengthy illness. Dr. Briner's home was in Williamsport, where he had practiced medicine for thirty years. He was an ex-president of the Pickaway County Medical Society and held numerous public offices. Surviving are his widow and one daughter.

James P. Dice, M.D., Eclectic Medical College, Cincinnati, 1869; aged 79; died at his home in Xenia, May 18. Dr. Dice served as an assistant surgeon during the Civil War, after which he located in Missouri and practiced there until 1876, the year of his removal to Xenia. He had been retired for several years. He leaves one son, Dr. Walter G. Dice of Toledo.

John Franklin Grabill, M.D., Miami Medical College, Cincinnati, 1880; aged 65; died at his home in Elyria, May 13.

Rudolph Heym, M.D., Homeopathic Hospital College, Cleveland, 1876; aged 71; died at his home in Cleveland, May 8. During the Franco-Prussian War Dr. Heym served as a pharmacist. A native of Germany, he came to America in 1872 and located in Cleveland two years later. After receiving his medical degree he began practice in Upper Sandusky and later served as coroner of Wyandot County. Returning to Cleveland in 1880 he practiced there continuously until his retirement a year ago.

Abraham Suter Metzler, M.D., University of Wooster, Medical Department, Cleveland, 1868; aged 81; died at his home in Coshocton, May 14, following an extended illness. Dr. Metzler was a veteran of the Civil War. Before locating in Coshocton 14 years ago he practiced at Baltic and Keene. He leaves a widow, four daughters and one son, Dr. Victor W. Metzler of Atlantic City.

Herbert E. Noble, M.D., Toledo Medical College, Toledo, 1884; aged 66; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home

in Toledo, May 29, after a long illness. Dr. Noble had practiced in Toledo since 1896. He leaves his wife, two daughters and two sons.

Francis Nelson Pilcher, M.D., Columbus Medical College, 1891; aged 53; died at Grant Hospital, Columbus, May 18. Dr. Pilcher practiced in Columbus for 18 years, coming to that city from Athens County. He is survived by one son.

Samuel B. Ruby, M.D., licensed to practice, 1897; aged 66; died at his home in Union City, May 16, after an illness of four months' duration.

Daniel Webster Rumbaugh, M.D., University of Wooster, Medical Department, Cleveland, 1873; aged 75; died in a Sandusky Hospital, May 11, from complications. Dr. Rumbaugh's home was in Willard, where he was a practicing physician for 30 years. He had not been in practice for some time, however, but held the position of postmaster. His widow, one son and two daughters survive.

Adelbert N. Russell, M.D., University of the City of New York, 1874; aged 70; died at his home in Cleveland, April 15.

Frederick C. Vogel, M.D., Medical College of Ohio, Cincinnati, 1900; aged 45; former member of the Ohio State Medical Association; died at his home in Cincinnati, May 18. Following two years' interne service at the city hospital, Dr. Vogel studied abroad, after which he entered practice in Cincinnati and continued until ill health forced his retirement last fall. Surviving are his widow and three children.

John S. Wood, M.D., Western Reserve University, Cleveland, 1876; aged 67; former member of the Ohio State Medical Association; died at his home in Cleveland, May 6, from heart disease. Dr. Wood was well known as a collector of books, being the owner of an extensive collection of rare and first editions and etchings.

Robert L. Woodward, M.D., Western Homeopathic College, Cleveland, 1867; aged 82; died at his home in Somerset, May 15, from uremia. Dr. Woodward moved to Somerset from Zanesville in 1869, and engaged in active practice until a few weeks before his death. He served as a member of the school board, village council and mayor for more than a quarter of a century. Two sons survive, one of whom is Dr. Edward Woodward of Versailles, Kentucky.

School Children Effectively Teach the Principles of Health by Means of Artistic Pageantry

Make health attractive and desirable, point the way to attainment, and the fight against disease is won. The spirits beautiful surround you, good fortune crowns you, and success and happiness follow you. This is the appeal made to Ohio's children through the spectacular health pageant, "Health Wins!" which is now being presented as one of the educational activities of the Ohio Public Health Association, Modern Health Crusade Department, in many different sections of the state.

The pageant written and staged by Mr. and Mrs. J. Clarence Sullivan of the recreation department of the Columbus schools, has been worked out on an elaborate scale. A minimum of 500 local children drawn from both rural and urban centers, are trained by an expert teacher for three weeks before the pageant is produced. The children are chosen not with the idea of secur-

some food—Afraid-of-the-Air by Fresh Air, Darkness by Sun Light—Gloom by Good Cheer, and finally come the Court of the Holidays, and the Spirits Beautiful, and Uncle Sam with Columbia and Good Fortune who bestow the gift of Health, Happiness and Success upon the children.

The production is primarily beautiful, artistic and entertaining in order to capture the imagination of not only the children but of the adults. The story has been simply arranged in a series of episodes, the action being continuous and without dialogue—covering not more than an hour and a half.

The effects employed in the production are on the same scale as those which were used in the performances of the spectacle at the Ohio State Fair last fall, when a special force of police had to be employed to handle the crowds that flocked



Finale of pageant "Health Wins!" Columbus, April 7-8, 1921.

ing the graceful, most easily trained, but to teach those who especially need self-expression and health education.

The appeal to idealism inherent in child nature, the unaccustomed beauty of the setting in which they find health enthroned, the music, the lights, the lovely soft colors of the costumes—the realization, to most of them a wonderful new awakening, that they are able to evoke the thought through rhythmic motion which will point the way to health and happiness and success,—makes a vivid impression on the child mind.

The story briefly concerns the adventures of a school boy and girl against whose health and happiness the villain Disease conspires. He marshalls his forces, Dirt, Afraid-of-the-Air, Laziness, Candy, Cake, the Glooms and two malicious sets of germs, to work the undoing of the children, but the spirit of the Modern Health Crusade comes to the rescue and unfurls his scrolls one by one as each new enemy appears in the path of the children. Dirt is overcome by the water sprites—Candy by milk and whole-

to the pageant staged by Mr. and Mrs. Sullivan—showing the valuable medium in health education that pageantry affords in reaching the heart, home and intelligence of the parent. The settings include tall, majestic pillars for a background, mammoth imposing platforms and canopies for a central point of interest and decoration.

Each group is beautifully costumed in striking and significant colors. As a means of suggesting the outdoors, a dance is given replete with joyous movements and happy expressions. This number is ushered in by a processional, headed by girls in green and carrying arches adorned with flowers of many hues, symbolizing the inspiring beauty of the green fields and blossom dotted gardens. The dancers use scarfs, which are hand-dyed in a design of flower petals. Colored lights are thrown on this group from the mammoth spotlight. The sunbeams, too, are rich in costumes of gorgeous orange and red tints of the rising sun, and these are then all refracted out into the dazzling white rays. This

combination of movement, color and symbolism never fails to bring repeated applause.

A military drill is presented by boys in patriotic costumes. They make their appearance in the story of the pageant at a point where the School Boy and School Girl have just been frustrated from reaching Success and Happiness by Disease and the Germs. The propagandists point out to the School Boy and School Girl that the thing for them to do is to make use of the Health Helps such as Water, Fresh Air, Sunshine, Wholesome Food and the like. The children accept their advice and all goes well. The propagandists in their drill emphasize the central principle behind the work of the local health agencies. The brisk, determined character and the steps in this drill make the presentation one of the most effective in the pageant.

"Work" is presented at the climax of the pageant story and has for its purpose, the emphasizing the idea that a proper proportion of work is an essential part of a program for good health. The plot suggests that suitable work makes for clearness of thinking and creates poise. The little girls who take part in this rhythmic are dressed in an idealized costume, suggesting the standard laboring man's outfit, surmounted by a square white cap. Their combined drill-dance puts them through all kinds of paces. They play leap-frog, crawl under one another and upon one another and join in one athletic stunt after another. The general effect is not only descriptive, but unique.

The lamps employed are the mammoth searchlights first used in the epoch-making production of "Caliban" at the stadium of the Columbia University in celebration of the Shakespearian Centennial. These consist of a huge hood mounted on a high iron standard. The hood has a mirror operating on a focusing plane, which enables the operator to direct the lights to any distance up to 600 feet. These lamps are also equipped with color frames so that different toned lights can be thrown upon the costumes as the groups are dancing. This feature is taken advantage of particularly in the interpretative presentation of the Water Sprites whose movements are composed to resemble those of rippling water. Here the streamers on the costumes of the little girls are converted into different shades by the rays of colored lights from the lamps. Then, too, long distance spotlights are utilized to make several stunts of the character, Disease, as impressive as they can be. To make possible the easy operation of these lights, the Ohio Public Health Association sends with this pageant a big portable switchboard which is connected up with the main feed wire and then with the various lamps.

The principle of health education for children emphasized by the pageant, is strongly endorsed by State Department of Public Instruction, and plans are under way to make the health teaching in the schools more effective. It is recognized that health must be a joyous, dazzling achieve-

ment. Prevention of disease has too long been taught through despair-producing statistics. Joy should usurp the role of fear in dealing with the minds of children whose grasp of technicalities is limited. There is need for accuracy and for better systems of record keeping, but morbidity and mortality records should be reserved for the scientific workers.

A Goal for Cincinnati

Judging by the expression in the following letter, which is typical of others, the seventy-fifth annual meeting of the Ohio State Medical Association was a success. Hundreds of members already are looking forward with highest expectations to the next annual meeting in Cincinnati. Editor *The Journal*:

The Journal is ever ready to initiate helpful innovations and to express appreciation of favors extended to the profession. Therefore, it may find room for this slight tribute to the officers of the Ohio State Medical Association and to the people of Columbus.

In every way, the 1921 meeting of the Ohio State Medical Association was the most successful one of its seventy-five annual meetings. The papers read in each section were unusually timely and excellent. The sessions of the House of Delegates were lively as well as duly deliberate, so that matters of vital concern to the profession were settled harmoniously, and, it is to be hoped, rightly. The luncheon meetings were never more interesting, instructive and enjoyable. The smoker was a decided hit, and "the best ever." The entertainment by the children from the State Institution for the Deaf and Dumb was a wonderful revelation of the success of patient and efficient endeavor in a field which our fathers regarded as almost hopeless. The vaudeville and boxing match were better than advertised. And how few and insignificant were the things found by the police on the hips of the physicians. The banquet was fully up to our high expectations.

The people of Columbus seemed glad that we were in their city and anxious, in every way, to help make our stay pleasant.

Cincinnati "must go some," if she expects the 1922 meeting to equal the 1921 meeting of the Ohio State Medical Association.

GAINOR JENNINGS, M. D., West Milton.

ANNOUNCEMENTS FROM W. R. U.

Professor F. Thwing, for 31 years president of Western Reserve University and Adelbert College and the oldest college president in point of service in the United States, has tendered his resignation, to become effective either in August or November, at the pleasure of the trustees. The medical department of the university had been made the recipient of a gift of \$500,000 in cash from Mr. Samuel Mather of Cleveland, a trustee of the institution when Dr. Thwing was first elected.

Ohio Section Clinical Congress American College of Surgeons --- First Annual Session

The First Annual Session Ohio Section, Clinical Congress, American College of Surgeons, was held in Cleveland, April 1-2, 1921, under the chairmanship of Dr. Charles S. Hamilton, Columbus, Ohio.

The mornings of the meeting were devoted to general and special surgical clinics and demonstrations of diagnostic methods at Charity, City, Huron Road, Lakeside, Maternity, Mt. Sinai, St. Alexis and St. Ann's Hospitals. Lunches were served the surgeons in attendance by the various hospitals.

Dr. George W. Crile, was chairman of the local Committee on Arrangements, and Dr. O. A. Weber was Secretary. Dr. J. Edward Pirrung, Cincinnati, as Secretary of the Ohio Executive Committee was in charge of the scientific program, and Dr. Walter H. Snyder, Toledo, Counselor, presided at several of the sessions.

In opening the first scientific session, Dr. Hamilton thanked those having the meeting in charge and then introduced Dr. Hugh Cabot of Ann Arbor, Mich., who spoke on

"THE DIAGNOSIS AND MANAGEMENT OF SMALL RENAL AND URETERAL CALCULI"

Dr. Cabot said in part: It is difficult to lay down dogmatic principles in the diagnosis and management of small stones as so many of them, if left to themselves, pass without any especial complications. Many patients suffering with calculi never go to a physician and it is not unusual for stones that have been adjudged impassable to be passed by the patient. Hence it is of so much importance to be able to differentiate and handle the doubtful cases and to be able to show ample cause and justification for surgical interference. Unless there is evidence that calculi are causing damage it is best not to interfere in cases that are otherwise looking after themselves.

I have had very little experience in massaging a stone down the ureter. Keyes relies on this maneuver to some extent but it is efficient most probably only in such cases in which the stone would pass any way.

Opinions differ regarding cystoscopic manipulations. Undoubtedly catheterization of the ureter and dilation, with or without local anesthesia, does assist in provoking the passage of the stone. Local anesthesia does not seem to add materially to the technique by combating spasm and teasing the stone with the ureteral catheter is effective because it assists in changing the position of the stone.

Damaging back pressure is not always dependent on the size of the stone. Large calculi may cause little or no damage from back pressure while small stones may do the reverse. Pain due to distention is more apt to be caused by complicating infection than by pressure.

Calculi may be said to be too large to pass or so small that they will pass. Radiography is a great aid in coming to definite decision on this point. The radiographs, however, must be made by an expert and carefully interpreted.

It is quite remarkable how many patients have lost appendices and other abdominal organs when the real cause of their pain was the spasm of renal or ureteral calculi. Such cases usually present attacks at long intervals and the pain is never very severe. Interference as a rule is not justified.

Successive radiographs serve to prove that stones not only change position from day to day in their progress down the ureter but also that stones may go backward on account of retrograde peristalsis, frequently leaving a segment of dilated tube showing in the radiograph. On account of these changes in position it is inadvisable to operate on the basis of any radiograph that is over 24 hours old. This is especially important when patients have been *chucked about* a good deal after the X-ray examination.

Infection always indicates interference. Occasionally patients present with only the symptoms of frequent and painful urination and microscopic blood is found only rarely. Infection as a rule accounts mostly for frequency and distress in urination but stones may cause the same symptoms.

It is of interest to note that patients with stones are in the early twenties and sometimes the only diagnostic sign is pain in the kidneys region on stepping down. Some small stones may cause a high degree of dilatation and distension and jarring the affected side causes pain that is symptomatic and diagnostic.

Occasionally patients present with pain in the scrotal region and blood in the urine and some prostate involvement is considered whereas the same symptoms are also associated with calculi.

While some stones may be lodged in the pelvis of the kidney or in the ureter for a long time without showing much damage on radiographic examination others cause irreparable damage in a few months and necessitate removal.

Long narrow stones are prone to cause patients to lose abdominal organs through operations other than for calculi. These long stones do not readily turn the corners of the ureter and are inclined to become impacted at the top of the bladder. Here they may only moderately obstruct the ureter, but they prepare the way for infection. In passing the catheter is scratched or the radiograph discloses their presence and situation. The submarine type of stones are common and engage very easily for passage down the ureter but when manipulated their position cannot readily be changed or improved. The resulting kidney damage is usually slight. An X-ray

of one such stone, after six years of symptoms, showed only slight dilation of the kidney, pelvis and calices. Twin stones belong to the non-passable type as a rule and usually do too much damage to be left alone. They may be readily mistaken for one stone of the submarine type. Serial radiographs are valuable for differential diagnosis under these conditions.

Peculiarly infection of the bladder and tuberculosis of the kidney may cause dilatation of the ureter similar to that left behind after the passage of a stone. Distension may also cause angulation of the ureter and exaggerate the distension.

In patients who have been having renal colic with a demonstrable stone and the pains are abruptly reinforced by chills and fever, infection has occurred and operation is advisable.

Infrequently serial radiographs will be negative and yet the symptoms may point to stone. Thus in one patient, a boy of 16 years, interval pain, associated with nausea and vomiting and distress in the upper left abdominal quadrant of 12 years duration with the discovery of constant microscopic blood lead to the diagnosis of a calculus. Having ruled out infection, and with other negative symptoms but with dilation of the lower calix of the kidney, a stone, engaging at long intervals, may be suspected. Such stones may be of considerable size and have a tit-like projection into the ureter, which causes complete obstruction and early infection. Large round stones are more usually found in the lower calices and it is very important to determine the position of such stones before going into the kidney to search for them.

Stones showing in the pelvis but with the radiograph also presenting lower dilatation have most probably been down the tube and returned by reverse peristalsis.

In conclusion we should assume all stones innocent until proved guilty. Seventy per cent. pass and of the balance a very considerable number may be made to pass by various means. Those stones which do not pass when given an opportunity and which show kidney damage, dilatation of the pelvis or calices, should be operated upon. Operation is also indicated in the presence of acute infection.

Removal of stones materially helps the kidney to recover from its damaged condition. It is interesting to note that the group of cases presenting alkaline urine show a high rate of recurrence of calculi. However, after operation the pain with succeeding stones seems to be much less.

Following this, Dr. Hamilton introduced Dr. John W. Wheeler of New York City, who presented a paper on "Restoration of the Obliterated eye Socket," published on page 456 of this issue.

These scientific papers were followed by talks on the Program of the American College of Surgeons for the benefit of the surgeons, hospital superintendents, sisters and nurses in joint meeting.

Judge Harold M. Stephens, acting director of the American College of Surgeons, spoke on

"HOSPITAL STANDARDIZATION"

He said in part: Fundamentally the program of the American College of Surgeons is one for bettering surgery by improving hospitals. It was found from an investigation of 3,000 hospitals that these institutions were riddled with many of the defects analogous to those that had been found in making a survey of the medical schools and bringing them up to several standard grades. The hospital situation today is such as to merit a great deal of attention. To begin with many hospitals have no organization of the staff and no group interest or any focusing of their scientific efforts, such as is becoming common in the better industries of today.

Also there is no restriction to the admission of incompetent or unethical doctors to the staff. The old idea that the patient may select his doctor is obsolete. Hospitals should be in a position to discriminate regarding those of the profession who shall be on the staff, and who shall practice in the hospital.

Many hospitals investigated entirely lacked any case record system. Many more had little or no equipment for laboratories or entirely inadequate equipment for their needs and most lacked the technicians to operate them.

In adjusting these matters the greatest obstacle encountered was the personal viewpoint on the part of both trustees and members of the staff. While hospitals are not in business to make money they should be 100 per cent. efficient in saving life or else they should be out of business. Of course any conflict of the commercial with scientific must be resolved in favor of science. The remedy in this instance would seem to be minimum standards. Such standardization is not to result in bringing all hospitals to the same type but rather is the setting forth of an ideal for scientific success, a minimum ideal that should at least be reached.

In skeleton these minimum standards mean (1) a staff organization of physicians and specialists of proper caliber and honest attainments; (2) a comprehensive system of case records, and (3) adequate laboratory facilities for all routine purposes with technicians to operate them.

This ideal is being offered; it is not trying to be enforced. The surveys that have been conducted so far have been undertaken in the spirit of helpfulness. We made the hospitals of over 100 beds our first concern as they handled the vast majority of all patients. We are now surveying the smaller hospitals and as our surveyors report the hospitals are listed with the data

that speaks for their condition. Of 697 of the larger hospitals in the United States and Canada only 18, in 1918, met the minimum standards. In 1920 over 405 had attained these standards and many had gone beyond. The problem still presenting is a human and educational problem and its solution needs the mutual cooperation of all concerned.

Rev. C. B. Moulinier, S. J., president of the Catholic Hospital Association, then spoke on

"THE PROGRAM OF THE AMERICAN COLLEGE OF SURGEONS"

We are here, said Father Moulinier, because we are convinced that there is something deeper in this program than mere standardization. Frequently the real function of an organization and its movement is lost in a wealth of inconsequential detail. Thus it is difficult to project the real purpose of this meeting into its scientific atmosphere. We are here not so much to discuss surgery and hospital methods as to inspire the profession and all others interested with us in the saving of life with that something which lies beyond and above the mere science and art of medicine. We are not here merely to give impulse to minimum standards but to provoke interest in an ever rising standard that the few now attain but that all should aim at and eventually achieve.

Ours is not a better-than-thou movement. Science demands at its best an ever upward aim and purpose. These meetings should serve the same good purpose as the work of the Council of Education. All the work of standardizing hospitals would be the overlapping of many separate movements except for the aim we have behind it. While such clinics as are being held are valuable from the scientific standpoint they do not represent the prime purpose of this gathering. They are duplicates of many others. Standards are not only to get hospital staffs to working in unison, to secure case records and laboratory facilities. There must be a purpose behind these standards to lift up men's minds and purposes to a new realization of and a dedication to the true scientific spirit.

To reach its highest application *betterment* must delve the depths of the soul. Three fundamental things must be done. The facts must be found, then filtered and finally rendered effective. So far in medicine the facts are mostly on the surface. The real, underlying facts, yet to be found, lie undisclosed in what is being done in the hospitals, medically, scientifically and religiously.

This is not as easy as it sounds in the telling. If standardization means betterment everyone must strive for truth individually or in concert, alone or in groups. Everybody concerned must play the game whether on the team or sitting on the side lines.

Is it possible that facts are not being published to assure proper treatment? Is staff work merely social meeting or is it the facing of dis-

agreeable facts? Are we willing to expose our own weaknesses, jealousies, and lack of teamwork, by reason of which patients have suffered?

In answering these queries we see how important it is that the right personnel must be found for hospital work. They must be lovers of truth, without selfishness, without conceit and without cowardice. They must be readers, thinkers and searchers seeking the truth, no matter in whatever capacity they are employed. No group of people at the present time have a more serious work or responsibility than the combined duty of those handling a modern hospital.

There was a time when the individual doctor had to carry all this burden in his own way, but that is now a thing of the past. The day of the small, conceited medical man is gone. This type are the ones who have interfered with betterment. In the analysis character is the criterion of success in this modern movement and there is no room for the man or woman of small mind and limited vision in the modern hospital. The altruism only called upon in the past from the clergy is now demanded of all those concerned with medical practice and the effort to realize this altruism is not an idealistic dream but a real concerted movement to secure men and women of the caliber who can make this altruism a fact. This achievement is then their glory and their credit.

That is why I reiterate that members of the College do not yet fully understand its deeper significance and success. Some members have indeed been obstacles, for they have been possessed of the spirit of getting instead of giving. Fundamentally the success of the College is predicated on the idealism of giving service and the movement is a spiritual one of lifting the profession to a higher plane and in so doing giving to the hospitals a higher standard. Finally, if the College is to come into its own as the potent influence it should be then its members and those associated with them must stand behind it more strongly, sincerely and generously than in the past.

Dr. F. W. Slobo, of the hospital survey department of the College, was next called upon by the chairman to detail manner in which the College had proceeded to develop higher hospital standardization and to give an account of its results. He spoke in part as follows on

"HOSPITAL STANDARDIZATION"

The following is a report for 1920 of the program of hospital standardization undertaken in 1913 throughout the United States and Canada by the American College of Surgeons. During these years the program has come to be a practical answer to the question as to how the people of these countries may protect for themselves the right to be well. The initiative in the work springs from the medical profession. Through definite and regular analyses of the care given to patients in hospitals the

profession has brought about a swift reconstruction of its own responsibility, socially and scientifically, to the public; and the public has responded in turn with new interest in hospitals, with increased confidence in the physicians and surgeons engaged in the work, and with additional financial support toward all that these physicians and surgeons desire.

Hospital standardization aims to create conditions in the practice of medicine out of which every patient, however humble, may receive the highest service known to the profession. Through conscientious and fearless study of what happens to patients from month to month, it aims to do away with lax or lazy diagnoses and treatments, with unnecessary surgical operations, and with operations performed by unskilled surgeons. It aims to prevent avoidable mistakes from happening a second time; to create and to protect the right to be well for every man, woman, and child.

In order to give the program a definite and tangible beginning, the College, which is an association of 5,000 surgeons, proposed to the hospitals and to the medical profession, in 1917, a minimum standard of service to patients. It then employed visitors, or "inspectors," to present this standard to the hospitals and doctors, and to explain what the standard is and what it means. The College did not assume authority to enforce the standard. At all times the College depends upon the sheer merit and soundness of its proposals in order to win and to hold the co-operation of those concerned in the work.

The minimum standard, given in the following pages, is not a formula nor a set of rules like recipes in a cook book. It is in effect the statement of a principle. The principle is that those concerned in the care of the sick or injured shall bring their experience under regular review, and utilize their increased intelligence gained in this way for the better care of the sick or injured in the future.

The principle of hospital standardization means, then, that progress is forever a process of change. For example, the intelligent treatment of diphtheria today is quite a different treatment from what it was a generation ago. Right treatment of any illness is not a matter which can be settled once and for all time; rather it is a matter which is subject always to change and betterment. Always as a basis of progress the medical profession seeks to clarify what is obscure in its work, to trace consequences to their causes, to persist with sympathy and clear thought in order to find, if possible, the reason for each failure and then to take such action as seems best suited to prevent each failure from occurring again. When the members of a hospital staff, in dead earnest, work together in this way, they not only guarantee competent service to all patients in their hospital, but they put themselves into strong

position to ask for the confidence, good will, and financial support of the public for the hospital. Further, such a program is lasting inspiration to the staff members, for it encourages personal initiative, freedom, and foresight.

If now physicians and surgeons are to review in a satisfactory manner their successes and failures in practice, they must have the facts upon which the success and failures rest. Such facts are usually to be found in the "case record" of the various patients. It follows, then, that an adequate writing of case records is a fundamental necessity to the progress of the hospital. In fact, a hospital staff which does not with exacting care write its case records cannot review its own work; and if a staff does not review its own work and utilize the increased intelligence to be gained in this way, it can not ask upon a rational basis for the good will of its patients nor of its community.

There are other sound reasons for the writing of case records beside their value for purposes of review, but we need not here discuss them. It is enough to say that an adequate case record system is included within the minimum standard as an imperative factor in good hospital service.

Again, adequate laboratory service is included in the minimum standard. This requirement needs no explanation. It is today unthinkable that a hospital through its staff should attempt to study and treat illness or injuries without the facilities of a clinical laboratory.

Again, as fundamental to good hospital service it is assumed that men privileged to practice in each hospital are scientifically trained and high-minded. The evil of the division of fees became some years ago so prevalent that the College included a restriction against this practice in the minimum standard.

To summarize, the minimum standard is a statement of a practicable, workable, and constructive plan for hospital betterment. It is a standard that safeguards the care of every patient admitted to the hospital by insistence upon competence on the part of the doctor, upon thorough study and diagnosis in writing for each case, upon efficient laboratory work, and upon a checking up, at least once each month, of the clinical service rendered in the hospital. It fixes responsibility throughout the hospital. It calls for the "production sheets" of the hospital, but does not cause in any way violation of the confidential relationship between the doctor and his patient. It encourages and even compels research. It costs effort rather than money. It defines the minimum service to the patient, which, beyond all debate, is essential.

The plan of hospital standardization, as has already been stated, is the working out of a principle and not the application of a set of rules. It is a plan by which physicians and

surgeons are able to pledge right service to patients, not upon sentimental ground but upon ground that is altogether defensible and creditable.

THE ANALYSIS OF SERVICE

During these days much thought is being given to find the most effective means to review the clinical work of the hospital by means of analyses charts, which are found by a number of hospitals to be of stimulating value when presented to the staffs.* Copies of these data are placed in the hands of each member of the staff; point by point the data are reviewed and the responsibility for the character of the data is shared by each staff member.

In order to compile the data called for on the sheet, it is suggested that a daily review be made of the records of patients discharged. This review will include information under each of the headings of the sheet. When a daily record is kept in this fashion, the summary for the month is merely a matter of arithmetic.

From time to time exhibits are made showing these data comparatively through a series of months. In addition to these data some definite report of the laboratory service of the hospital is helpful. This report should show the extent to which the laboratory is used; and in this connection questions as to the adequacy and competence of the laboratory service should be raised by the staff. The staff should especially recognize good work on the part of the pathologist. All gross material removed at operations should go to the pathologist for report; and the case record of each death in the hospital together with the autopsy record, when available, should be presented as a routine at the next succeeding staff meeting.

THE SURVEY OF 1920

During the last three years the College has each year made surveys of the 697 general hospitals of 100 or more beds in the United States and Canada, measuring the extent to which these hospitals fulfill the minimum standard. The list of hospitals in this group which on inspection in 1920 fulfilled the minimum standard or which after inspection reported that they fulfilled the standard now contains the names of 407 institutions.

The advance which hospitals have made during these years is indicated by the following figures. Two years ago, 89 out of these 697 hospitals fulfilled the minimum standard; one year ago 198 out of the 697 met the standard; at the present time 407 of the group meet the standard.

During the past year about 300 of the 965 general hospitals having from 50 to 100 beds were

personally inspected by staff members of the College. No report of the findings among these hospitals is made at this time, as this work is still incomplete.

In Ohio of 35 hospitals of 100 beds or over, 25 are in the approved list. Of 34 small hospitals, 8 in Ohio meet the A. C. S. standards.

The three surveys made by the College were accomplished by means of personal visits to the hospitals by staff members of the College. These men, all graduates in medicine, went to the hospitals not as unwelcome visitors but rather as engineers, discovering first what the shortcomings of the institutions were in relation to the minimum standard and then indicating how such shortcomings might best be overcome. The council meetings held at the various hospitals by these inspectors proved to be an important element in the success of the work.

THE MINIMUM STANDARD

1. That physicians and surgeons privileged to practice in the hospitals be organized as a definite group or staff. Such organization has nothing to do with the question as to whether the hospital is "open" or "closed," nor need it affect the various existing types of staff organization. The word *staff* is here defined as the group of doctors who practice in the hospital inclusive of all groups such as the "regular staff," the "visiting staff," and the "associate staff."

2. That membership upon the staff be restricted to physicians and surgeons who are (a) competent in their respective fields and (b) worthy in character and in matters of professional ethics; that in this latter connection the practice of the division of fees, under any guise whatever, be prohibited.

3. That the staff initiate and, with the approval of the governing board of the hospital, adopt rules, regulations, and policies governing the professional work of the hospital; that these rules, regulations, and policies specifically provide:

- (a) That staff meetings be held at least once each month. (In large hospitals the departments may choose to meet separately.)

- (b) That the staff review and analyze at regular intervals the clinical experience of the staff in the various departments of the hospital, such as medicine, surgery, and obstetrics; the clinical records of patients, free and pay, to be the basis for such review and analyses.

4. That accurate and complete case records be written for all patients and filed in the hospital, a complete case record being one, except in an emergency, which includes the personal history; the physical examination, with clinical, pathological, and X-ray findings when indicated; the working diagnosis; the treatment, medical and surgical; the medical progress, the condition on discharge with final diagnosis; and, in

*Credit for aid in preparation of this form is due Superintendent Frank E. Chapman, Mt. Sinai Hospital, Cleveland.

case of death, the autopsy findings when available.

5. That clinical laboratory facilities be available for the study, diagnosis, and treatment of patients, these facilities to include at least chemical bacteriological, serological, histological, radiographic, and fluoroscopic service in charge of trained technicians.

THE DIVISION OF FEES

The division of fees, or fee-splitting, is the buying and selling of patients. The practice exists in various forms, but the most usual form is as follows: A general practitioner makes a diagnosis in which surgical interference is indicated. He then refers the patient to a surgeon for operation. The surgeon operates, collects a fee, and sends to the physician one-third or one-half of the fee, this last transaction being unknown to the patient. Sometimes the physician collects the fee "for the surgeon" and retains his percentage as agreed with the surgeon.

Sometimes the fee is divided with the explanation to the patient that the physician "assists the surgeons" or gives the anesthetic. In many such instances the explanation is a subterfuge for fee-splitting. A competent surgeon usually has a regular assistant and an anesthetist with whom he is accustomed to work, and is more able in this way to do good work than if he permits each referring doctor to assist him.

Undoubtedly the physician should be paid for the study and diagnosis of a surgical case. But he should be paid directly for this service by the patient. In the same way the surgeon should be paid directly by the patient. The surgeon can frequently be of service to the physician and to the patient by explaining to the patient the value of the study and diagnosis made by the physician. But the accounts of the physician and of the surgeon should not be confused or rendered to the patient as a single statement.

The evils of fee-splitting are, first, that it makes for incompetent surgery. The surgeon who is party to the practice gets his cases usually not upon the basis of merit, but upon the basis of the percentage of fees collected that he will give to the practitioners. The more incompetent he is, as a rule, the larger a percentage of the fees he gives to his co-fee-splitters.

Second, fee-splitting makes for unnecessary surgical operations. Under the fee-splitting system surgery becomes a commercial enterprise and not a professional service. Both the physician and the surgeon tend to make surgical diagnoses without adequate study, and the result is unnecessary surgery. Much of the unnecessary surgery of our present day is due directly to fee-splitting.

Third, fee-splitting, by introducing dishonesty

into medical practice, lowers the entire medical profession in the estimate of the public. The fee-splitter, for example, says to his patient that he refers him to a most competent surgeon, when he knows well enough that if he, the physician, were to be operated upon, he would select another surgeon. Further, the fee-splitter usually poses before his patient as having received little or no fee for his services when, as a matter of fact, he has received a large fee indirectly from the patient. He holds such a fee really as a theft.

The great majority of physicians and surgeons are eager to put an end to all fee-splitting. They ask hospital trustees to help them in this matter by excluding fee-splitters from the privileges of practice in hospitals.

OUTSIDE OPINIONS

The extent to which hospitals have given whole-hearted cooperation to hospital standardization is indicated by the "approved list." A large majority of the institutions not upon that list at the present time will doubtless be included in the list within a year or two.

Some expression of outside opinions of the work may here be of interest. The medical superintendent of one of the leading hospitals of the continent recently said, after years of practical administration of the standard: "The minimum standard is not, perhaps, so simple as it looks. But certainly it does not impose too great a burden of effort upon the doctor or upon the hospital. It calls for no undue expenditure of money. It is not impertinent, for it is based upon the sound principles of practice which the profession long ago accepted. It forces a constructive and co-operative scrutiny over all medical work in the hospital, unnecessary surgery, incompetent surgery, lax and lazy medical service, and all commercialism in medicine go down before it.

"The minimum standard is not a theory. Wherever it is tried with sincerity, it succeeds. One result of it, too, is that it swiftly submerges personal prejudices among doctors and unites them under those bonds which have always made the profession great."

Again, the World's Work last spring assigned to an investigator the task of making a report upon the effect of the minimum standard among hospitals. This report was published in the magazine for June, 1920. With regard to the minimum standard the writer, Mr. Hawthorne Daniel, says in part:

"The statement is simplicity itself, and yet, with all of its simplicity it contains just the suggestions that go to make good hospitals of mediocre ones; just the suggestions that lead to the conservation of lives and the elimination of unnecessary operations; just the suggestions that bring about the conscientious care that every patient in every hospital has a right to expect.

"From coast to coast the idea is changing the conditions in hospitals. Everywhere there is the ferment of development, the activity of improve-

ment. * * * The world of the hospital is changing. An advance normally to be expected in twenty years has come in three. For this opinion I am indebted to President Henry S. Pritchett of the Carnegie Foundation.

"The medical profession generally is to be congratulated upon the progressive work being accomplished by its many prominent members who are Fellows of the American College of Surgeons. In its membership the College includes the best men in the field, and there are few prominent surgeons in the country who are not on its roll.

"The medical profession is largely made up of men who are practical idealists. Sometimes, under the forces of circumstances, some of them may not have held entirely true to their own ideals, but it seems difficult to believe that many of them have ever allowed their ideals completely to lose control. And with the program of the College to supplement their own beliefs they are throwing aside those methods that are open in the least to criticism, and of their own volition have renewed and increased their efforts to bring about the reforms in which they always have believed.

"It is with this elusive force that the College has worked with such success. With the ideals of the profession visualized and with practical plans made to insure their application, the country may confidently look forward to a new era that is already partly here; when the hospitals of America will be satisfactory for service, from which selfish interest and careless methods have been abolished, and to which the country may look for considerate and efficient treatment, confidently expecting and receiving the utmost that the medical profession is capable of giving."

THE DATA COLLECTED

The work of the hospital visitors of the College is to collect exact information as to the extent to which each hospital visited fulfills the minimum standard. The visitor's card indicates the manner in which the data are recorded. On the face of the card the visitor reports concerning staff meetings, case records, and laboratory service; on the reverse side of the card concerning number of deaths, autopsies, and the extent to which the clinical histories in relation to autopsy findings are reported to the staff. General notes and the names and positions of persons interviewed by the visitor are also recorded.

Called upon to discuss this last paper Mr. F. E. Chapman, superintendent of Mt. Sinai Hospital, Cleveland, emphasized that hospital standardization was based on an ideal of service. The standard program being an ideal could only be effective when put into practice and the results secured depended entirely on the possibilities of the staff, management, and personnel as a team. There is a difference in merely accepting the minimum standards and in carrying them through.

Doctors are busy and they cannot do what the standards demand unless the hospital furnishes the proper facilities. While it is advisable to have the staff doctors take histories this should be done by means of dictating machines and later transcriptions. Stenographers are prone to waste the doctor's time. The same dictaphone method can even be used in the operating room.

The greatest lack in hospitals is a standard of performance. There should be the same efficiency as in large automobile shops. There should be some unification of method for various operations instead of a half-dozen varieties of preparation, sterilization, equipment operation and after-care.

Special charges penalize medical science, whereas the flat-rate can be made successful in underwriting the entire laboratory expense. Diagnostic laboratory test curves will rise to a peak under the influence of the flat-rate charge. Routine tests should be made in all cases. Thus it cost Mt. Sinai \$1400 during one year to make routine coagulation time tests but three bleeders were discovered and the expenditure of the money to do this was worthwhile.

Analyses of histories and history taking soon show slumps or improvements in the staff. I find that the staff must be dynamited every so often to keep it at top notch efficiency. The staff may have great ideals but it will slump from pressure of work. The interests of the whole hospital personnel must be identical. The superintendent is a necessary evil to unite all phases of activity and make them serve their special end. If we would be true to the obligations spoken of by Fr. Moulinier, we must give service even beyond that he has mentioned. The hospital must serve the community by restoring all patients to health and work in the shortest possible time.

Dr. C. D. Selby of Toledo, in further discussion announced that the first A. C. S. visitor had taken a dictatorial attitude in trying to enforce hospital standardization at St. Vincent's. Nothing had happened. The second visitor presented standardization as an ideal and the staff and hospital personnel accepted it as such and immediately and whole-heartedly made it effective. Almost at once the staff began to appreciate the advantages of histories, examinations and laboratory tests and there was a great deal of cross-consultation, analyzing of work and staff unification of purpose. The real function of the physician to use remedial treatment in its every phase became paramount and was made effective through those channels of specialized knowledge and skill represented in the staff and hospital personnel. Organization and cooperation has resulted in bettering the work of the physicians on the staff as well as that of the internes and nurses.

Dr. George W. Crile of Cleveland, in presenting the results of hospital standardization from the surgeon's viewpoint said that the most outstanding result had been in getting otherwise

generous trustees to be even more generous in appropriating and expending money for developing the accessory facilities of the hospital, such as the laboratory, case record departments and social service. In visiting other hospitals he had found that higher standards had favorably influenced the trustees, financial outlook. He complimented Mt. Sinai on the development of its analytical charts for enabling the staff of the hospital to check-up on its results. Higher standards have induced trustees to take renewed interest in hospital work and to become better acquainted with hospital needs and requirements. This has also had a favorable influence on the public as a whole and this was most desirable since the people were the ones to eventually benefit."

"PUBLIC HEALTH, A COMMUNITY PROBLEM"

The first evening session of the College was a public one and was held in the ballroom of the Hotel Statler. A large and enthusiastic audience greeted the speakers. Dr. Hugh Cabot, spoke on "Public Health, A Community Responsibility," and maintained that any community could buy health if it cared to pay the price. Civilization may be said to rise and fall in relation to disease. There is no fixed point in controlling disease for the moment an old ailment seems under control a new manifestation of it arises or some apparently new plague comes to pass. Congestion of population has intensified the struggle against disease as well as the problems of health. While it may be questioned whether the public schools communicate anything else there is no doubt that they do spread contagious disease. Unfortunately medical science is usually in advance of public demand for health protection. Hence it is that smallpox, an irredicable disease by means of vaccination, is more prevalent than it was 20 years ago because it is no longer feared and people have become very lax about prophylaxis or have allowed anti-vaccinationists too great leeway. People do not mind smallpox until it comes into their own home. For 20 years Philadelphia filled one of its largest graveyards with the victims of its drinking water and at Salem, Ohio, the use of cheap tile piping for the water supply has recently cost that community \$400,000 and hundreds of lives to save an initial expense of \$1500.

Courts as a rule have almost always cooperated in all efforts to improve health and to prevent disease. The highest death rate still continues in the country districts in which public health remains to be sold to the community. There is a dearth of doctors in the country because the younger physicians wish to practice in the vicinity of facilities for the best possible practice of their profession. Country doctors are of an average age of 60 years and do not meet the demands of present day practice. The community must have hospitals and health centers and if necessary the state must help finance them for

the benefit of all concerned. However, public opinion must want public health before it can be secured.

Dr. Willard Bartlett of St. Louis, spoke on "The Importance of Goiter Being Recognized by the General Public," and as his paper is useful for community publicity, it is published in full elsewhere in this issue of *The Journal*.

Closing the public meeting Judge Harold Stephens and Fr. Moulinier changed places on the topics they had presented in the afternoon.

In opening the scientific session on Saturday afternoon Dr. Walter H. Snyder introduced Dr. Bartlett who spoke on:

"A CONTRIBUTION TO THE SUBJECT OF LOCAL ANAESTHESIA"

We, in this country, have been far behind the foreign surgeons in using local anaesthesia as a routine, said Dr. Bartlett. However, local anaesthesia is being introduced in several of the more noted clinics and Dr. Labat of Pauchet's clinic, Paris, is introducing it at the Mayos. One of the most important phases of local anaesthesia is its psychological importance. It not only obviates the dread of general anaesthesia but is a great talking point with those who have experienced its benefits. If the operator is psychologically prepared to handle his patients and is an adept with local anaesthesia practically every patient is amenable to this form of pain relief for surgical procedures. As with general anaesthesia such obtunding as can be done in the anaesthesia room should be accomplished there rather than in the operating room. This not only saves the patient's nerves but also conserves the surgeon's time. Farr has found it advisable to let patients entertain themselves with candy, drinks or smokes, music and conversations as circumstances and conditions permit.

Local anaesthesia is indicated in all surgical conditions in which general anaesthesia adds to the risk of life involved and when local and regional injections suffice for the operative procedure. Local anaesthesia forces the surgeon to refinement of technique, and provides the conscious cooperation of the patient at all times. It may be used with entire satisfaction even in babies and small children. Post-operative complications are minimized and patients as a rule make a more rapid recovery under local than general anaesthesia.

Anocithesia is advisable in hospitals having all the facilities for its use. I try to avoid morphine as a preliminary drug and prefer choral enemas one hour before operation. Veranol has served me in good stead in scattered five grain dosage up to 30 grains in the 12 hour period before operation.

It is a great advantage for the local anaesthetist or operator to have all methods of infiltration and nerve blocking at his command. Some forms of regional anaesthesia, such as blocking the

splanchnics, are almost as difficult procedures as major operations and require considerable time. This fact must always be taken under consideration.

Ether may be used in combination with local for abdominal surgery. In this technique etherization is begun, then one-fourth grain of morphine is injected and the abdominal wall infiltrated. Incision is then made and the ether is discontinued after the operative area has been packed off and the viscus delivered. Only occasionally is ether required later for removing the packs, the infiltration sufficing for the operation and closure. We have found it quite advantageous to drain the gall bladder under local anaesthesia, infiltrating the abdominal wall, then aspirating the fluid contents the gall bladder and replacing it with five per cent. cocaine solution.

Also in patients requiring intra-pelvic and also plastic operations it is quite feasible to inject the anterior branches of the sacral plexus where they merge from the sacral foramina and after discontinuing the ether and closing the abdomen, to do the operation on the urethra, vaginal outlet, perineum or anus under the sacral anaesthesia induced.

Also the use of a very highly diluted solution of procain is valuable for obtunding the pain of injecting saline and glucose solutions under the skin.

In concluding the scientific session Dr. Lyndon Holt Landon of Pittsburgh, presented a paper on "Surgical Neuralgia of the Fifth Cranial Nerve" which is published in full in this issue, page 452.

It is anticipated that the Ohio Section of the American College of Surgeons will hold its second annual session in Cincinnati next spring.

The names of those who were registered as in attendance at the meeting from Ohio, were printed in the May issue of *The Journal*. Attendance was limited to members of the college and invited guests. Next year it will be extended to include surgeons passed by the credentials committee as eligible to fellowship.

Report Council on Pharmacy and Chemistry

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1920. Cloth. Price, postpaid, \$1.00. Pp. 72. Chicago: American Medical Association, 1921.

While New and Nonofficial Remedies consists in part of descriptions of those proprietary medicines which the Council deemed worthy of consideration by the medical profession, the Annual Reports of the Council on Pharmacy and Chemistry describe the preparations which the Council finds unworthy of recognition. In addition, these annual reports contain other announcements of the Council.

The present volume contains a number of interesting reports. Thus we find a statement which makes it clear that many of the large pharmaceutical houses are definitely opposed to

the work of the Council and will remain antagonistic until a very large proportion of the medical profession will give the Council their active support. The volume also contains a report on some digitalis preparations which the Council examined and declared to be pharmacopial digitalis products and therefore do not require the control of the Council.

Of the reports on proprietary medicines found unacceptable for New and Nonofficial Remedies there are reports on the following which, because of the publicity given the products by their exploiters, will be of special interest to physicians: Platt's Chlorides, Syrup Leptinol (formerly Syrup Balsamea), Sukro-Serum, Spirocide, Libradol, Supsalvs.

Of considerable interest are reports on a number of products which were admitted to New and Non-official Remedies on the basis of evidence which at the time seemed to indicate the products to have therapeutic merit, but which did not stand the test of time and which therefore have been omitted from the 1921 edition of New and Nonofficial Remedies. These reports give evidence that great care is taken to keep New and Nonofficial Remedies up to date.

Those who are not familiar with the methods of the Council in the examination of new medicaments or who may even have been inclined to look upon the acceptance or rejection of a medication by the Council as a somewhat perfunctory procedure, should read the report of "Chloryptus"—a chlorinated eucalyptus oil. Its proprietor believed it to be a most efficient wound antiseptic. He presented to the Council many lengthy reports of laboratory tests and of clinical trial. The Council found the evidence inconclusive and refused recognition to the product. The discoverer of Chloryptus apparently has accepted the conclusion of the Council—at all events it is not being pushed—and thus many a physician is spared the temptation of experimenting with a new drug which in the end will but add to his long list of medicaments which have been tried and found wanting.

Uncle Sam Recognizes Only M. D.'s

Orders received recently by Postmaster S. A. Kinnear, Columbus, from United States Postmaster General W. H. Hays direct him or other postal officials to accept certificates of illness of postal employees, when granting sick leaves with pay to such employees, only from regularly licensed medical practitioners. The orders state that certificates will not be accepted from osteopaths, chiropractors, mental healers, etc., unless treatment by such has been prescribed by a regular licensed physician or surgeon, or a medical officer of the United States. In such cases a certificate from the latter must accompany the certificates of the limited practitioners.

Large Number of Prospective Ohio Physicians Strive with June Examinations of State Medical Board

Judging by the number of applicants for certificates to practice medicine in Ohio who took the semi-annual examinations conducted by the State Medical Board, May 31 to June 3, inclusive, this state is not threatened with a shortage of doctors which some have predicted would develop as a menacing problem. One hundred and eighty-six physicians took the examinations, compared to a total of 160 a year ago and 132 in 1919.

The applicants represent twenty-four accredited medical colleges, including two in Italy, one in Canada, one in Greece, one in Hungary, the five Ohio schools, and fourteen others in various parts of the country, the complete list being as follows: Ohio State University College of Medicine, Columbus; Ohio State University College of Homeopathic Medicine, Columbus; Eclectic Medical College, Cincinnati; University of Cincinnati College of Medicine; Western Reserve University School of Medicine, Cleveland; Georgetown University School of Medicine, Washington, D. C.; Hahnemann Medical College, Philadelphia; Harvard Medical College; Jefferson Medical College; Johns Hopkins Medical School; Loyola Medical School, Chicago; Medical College of Virginia, Richmond; Meharry Medical College, Nashville, Tennessee; School of Medicine, National University of Greece; Northwestern University Medical School, Chicago; Royal University of Padua, Italy; Royal University of Palermo, Italy; St. Louis University School of Medicine, St. Louis; Temple University, Philadelphia; Royal Hungarian University of Budapest, Budapest, Hungary; University of Pennsylvania; University of Pittsburgh; University of Toronto, Toronto, Ontario, Canada; Woman's Medical College of Pennsylvania, Philadelphia.

The examination comprised two days of written and two days of practical work. The questions submitted to the candidates for licensure are printed below for the benefit of those who wish to review and test their ability to keep step with advances.

In addition to those taking the complete medical examinations eight osteopaths, fourteen chiropodists, four masseurs, and eleven midwives were examined in order that they might procure licenses in their limited branches.

SPECIALTIES

1. Eye: What is pterygium? What treatment would you advise? 2. Ear: Define acute catarrhal otitis media. Give symptoms and treatment. 3. Nose: How diagnose simple chronic rhinitis? Give a beneficial method of treatment. 4. Throat: What dangers attend tonsillectomy?

What are some benefits secured by the operation? 5. Dermatology: Give definition and symptoms of impetigo contagiosa.

ANATOMY

1. Describe the structure of the lung. 2. What are the salivary glands? Give their position and ducts. 3. Name the muscles of the thorax. 4. Give origin and insertion of the Psoas Magnus muscle. 5. Describe the aorta, and name its branches. 6. Name the branches of the external carotid. 7. Give the position of and the articulations of the ethmoid bone. 8. Briefly describe the stomach; give its average size, attachments, regional location and gross structure. 9. Give the anatomical relations of the ureters in the female. 10. Give origin and distribution of the pneumogastric nerve.

OBSTETRICS

1. What have you to say about the use of anesthetics in obstetrics, as to kind, time and method of administration? 8. Give symptoms and treatment of Placenta Praevia, before term and at term. 3. Give treatment of post-partum hemorrhage. 4. How would you manage a case of face presentation? 5. Differentiate between retained and adherent placenta, and discuss management of each.

CHEMISTRY

1. Describe two tests for organic matter in water. 2. Differentiate between fermentation and putrefaction. 3. What is ethyl hydrate? Give formula and tell how it is produced. 4. Mention the acid constituents of (a) gastric juice, (b) urine, (c) bile. 5. Describe two tests for glucose.

MATERIA MEDICA (REGULAR)

1. Carbolic acid: (a) give its therapeutic uses and manner of employment; (b) give symptoms of poisoning and treatment therefor. 2. Codein sulphate: Discuss therapeutic use, physiologic action and dosage. 3. Name three coal tar preparations; give their doses and indications for use. 4. In what conditions is normal salt solution used? How should it be administered? 5. Name the preparations of arsenic, giving doses of each and enumerate the conditions in which they are to be employed. 6. Ipecac: Discuss its action; name the preparations used, giving their doses. 7. What is the common name for magnesium sulphate? Discuss its properties, use and dosage. 8. Give the source, physiologic action, and dosage of official preparations of (a) veratrum viride; (b) aco-

nite. 9. Discuss the therapeutic action of heat and cold. 10. What is an antacid? Name five, giving dose of each and indication for use.

MATERIA MEDICA (ECLECTIC)

1. Name three plant remedies that act as emetics. Give specific indications and varying dose. 2. Give the specific indications for the use of asclepias and the usual dose. 3. Name the alkaloids of belladonna, opium, nux vomica, and coca. Give the usual dose of each. 4. Give the indications for the use of alkalies. 5. Describe poisoning from corrosive sublimate. Give treatment. (b) Poisoning from paris green. Give treatment. 6. Name three plant remedies of value in influenza and carefully discriminate as to use and dosage. 7. Give the botanical origin and other name of podophyllum, black cohosh, aconite, cactus and veratrum. 8. Differentiate carefully between the therapeutic uses of aconite and veratrum. 9. When, how and in what doses would you administer antitoxin? 10. Describe a fluoroscope; a skiagraph. Name the most important ray emanating from the X-ray tube.

MATERIA MEDICA (HOMEOPATHIC)

1. State briefly the main physiological action of Baryta Mur. 2. What is the chief vascular action of arsenicum album? What disease has a pathology exactly like that produced by arsenic? 3. Give the physiological action of gelsemium. Give three salient symptoms of this remedy. 4. Name the drugs in the Muscarine Group and give those physiological effects that are common to all. Give dose of each. Mention conditions in which they may be used for physiological effect. 5. Give the indications for Eupatorium Perf. and for two other remedies frequently used in influenza. 6. Why does Argentum Nitricum produce suppuration? Give indications for its use in suppurations. 7. What remedies produce in their symptomatology a condition similar to the clinical picture of hypothyroidism? 8. What tissues are involved in a case of paralysis when Curare is the remedy? When Coccus Ind. is indicated in convulsions, where is the seat of irritation? 9. Give indications for Bromide in croup; Bryonia in constipation; Pulsatilla in chlorosis; Phosphorus in pneumonia; Cantharis in dysentery; Causticum in cough. 10. What is the action of Merc. Cor. upon the small intestines? Give the indications for the use of this remedy.

PRACTICE

1. Give the etiology, symptoms and treatment of acute endocarditis. 2. Give the treatment of an early case of pulmonary tuberculosis. 3. Give the symptoms and treatment of pernicious anemia. 4. In a man of about fifty years of age with a uremic convulsion; discuss (a) the immediate treatment, (b) the subsequent treatment. 5. Discuss the etiology and treatment of

cervical adenitis in childhood. 6. Give the manifestations of rickets in a child of three years. 7. Give the treatment of entero-colitis in a young child. 8. Give the symptoms of disseminated sclerosis. 9. Name some causes of palpitation of the heart and state its significance. 10. Give etiology of "muscular rheumatism."

BACTERIOLOGY, PATHOLOGY, PUBLIC HEALTH AND HYGIENE

1. Give the technique of making a blood culture, including method of obtaining the blood. 2. Name the distinctive characteristics of the following micro-organisms: b. tuberculosis; b. anthracis; b. typhosus; b. diphtheria; and b. tetani. 3. Define: lysins, agglutinins, precipitins, complement, and amboceptor. 4. Give the pathologic changes—(a) during active endocarditis; (b) the later results. 5. Describe the method of production of a tuberculous cavity in the lung. 6. Name the pathologic possibilities in a case presenting an enlarged spleen. 7. Name the possibilities in a mass felt in the right hypochondriac region. 8. What is botulinus poisoning? With what food-stuffs is it incurred, and how may it be guarded against? 9. What means would you take as health officer in the case of an immigrant with suspected typhus fever? 10. In a case of a person bitten by a dog suspected of having rabies, what would be your procedure—(a) in regard to the patient; (b) in regard to the dog?

PHYSIOLOGY

1. Describe the red corpuscles and give their most important function. 2. What is understood by endocardiac pressure? 3. How is asphyxia produced? What are the causes of death from asphyxia? 4. Give the metabolism of (a) proteids; (b) carbohydrates; (c) fats. 5. Describe the process of absorption by (a) blood vessels; (b) the lymphatics. 6. Mention some organs that are thought to furnish an internal secretion. 7. What are the sources of animal heat? Give the normal temperature in various parts of the body. 8. Define (a) tonic muscular contraction; (b) a clonic muscular contraction. Give an example of each. 9. State briefly the function of (a) vas deferens; (b) vesiculæ seminales; (c) the prostate gland. 10. What is the condition of the eye in myopia? How may it be corrected?

DIAGNOSIS

1. A man of 50 years has epigastric pain after meals and has lost weight. Outline procedure of diagnosis. 2. State differential diagnosis of renal tuberculosis. 3. Discuss the significance of jaundice and of enlargement of gall bladder in diagnosis of the disease of the biliary organs. 4. What immediate symptoms occur in rupture of abdominal viscus? What symptoms point to duodenal rupture? 4. A man of 40 years has

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blood pressure of 140/30. Describe the findings on examination of the heart, giving diagnosis. 6. State the chief differences between lobar pneumonia and epidemic influenza. 7. Differentiate smallpox from varicella; typhoid fever from typhus. 8. Name five causes of enlargement of cervical lymph nodes. 9. State diagnosis, course and prognosis of pyelitis. 10. Make a general outline of differential diagnosis for cases showing a steady loss of weight.

SURGERY

1. Patient with a good-sized tumor in breast and a hard mass in axilla same side, nipple retracted, marked loss in weight, pallor approaching cachexia. Discuss diagnosis, treatment and prognosis. 2. Discuss treatment of un-united fracture of long bones of lower extremities, cause, treatment and prognosis. 3. Give differential diagnosis of dislocation of hip and fracture of neck of femur. 4. Discuss etiology and treatment of shock. 5. Discuss causes of obstructive jaundice. 6. Discuss the surgical management of compound comminuted infected fracture of the middle third of humerus. 7. Discuss gunshot wound of kidney involving the hilum and describe treatment. 8. Diagnosis and treatment of carcinoma of tongue. 9. Discuss surgical management of empyema caused by (a) streptococcus hemolyticus, (b) pneumococcus. 10. Discuss advantages and disadvantages of open and closed administration of anesthetics.

Plans of Medical Ex-Service Men

Medical ex-service members of the Association have appointed a committee to arrange for a special program and dinner during the next annual meeting to be held in Cincinnati. A brief conference was attended by about seventy-five in Columbus at the time of the recent state meeting, when Dr. Charles T. Hunt, Miamisburg, and H. H. McClellan, Dayton, were re-elected to their respective offices of president and secretary.

Book Review

Block Anesthesia and Allied Subjects.—With special chapters on the maxillary sinus, the tonsils and neuralgias of the nervus trigeminus. By Arthur E. Smith, D.D.S., M.D., Oral Surgeon to Frances Willard Hospital and to the House of the Good Shepherd, Chicago. Royal Octavo; 895 pages; 595 illustrations. C. V. Mosby Co., St. Louis, 1920.

The principal object of Smith in writing his book has been to give in a practical and usable form the technique of block anesthesia and to include the important allied medical and surgical

phases, which are so closely interwoven and the knowledge of which is so essential to success. The book is primarily for oral surgeon, dentists and students, and an endeavor has been made to cover the subject and the technique step by step in a detailed and thorough manner.

As a special textbook it will appeal to two classes of readers, those who wish to consult it for reference in connection with special cases and those who wish to acquire a systematic knowledge of block anesthesia in all its phases. The technique for the various block injections is based upon anatomy and Smith is to be complimented on the immense amount of personal research he has achieved to place each detail of technique on a scientific and accurate basis, thereby making his advice as simple and practical as possible.

Smith has followed a uniform plan in elaborating the technique of each deep block injection by discussing the typographical anatomy; the needle employed; the technique of injection; the injection of the solution; precautions; the waiting period; the area obtunded; and the blocking of communicating branches. This method enables those using his book to turn to a complete exposition of any desired injection.

Aside from an exhaustive and comprehensive consideration of block anesthesia in relation to dentistry, Smith has devoted special chapters to blocking for tonsillectomy, septal, head, jaw and neck operations and other procedures which are of special interest to oral surgeons and specialists. His technique for injecting the Gasserian ganglion and for blocking in sinus operations will also interest the general surgeon.

After a consideration of the historical evolution of anesthesia and the development of local anesthesia and its methods of application, Smith discusses at length the neuroanatomy of his subject as well as the special anatomy of certain regions. He then elaborates on the fundamentals of block anesthesia itself and considers in detail the various local anesthetics and their combinations and uses. In this matter, as in his anatomical studies, the author has done a great deal of personal research. The armamentarium, preparation of solutions and the general considerations of operative technique are discussed in detail as well as the preparation of the patient, site of injection and field of operation.

After showing the application of block anesthesia to every possible dental, oral and special operation, all illustrated with minute detail and accuracy, Smith concludes his volume with pertinent suggestions regarding the handling of post-operative complications, syncope, shock and collapse.

The volume as a whole is a masterpiece of research and will no doubt endure as a classic on the subject. It is given to few to produce such a work and it is to be hoped that the volume will be as widely read, studied and consulted as it so well deserves.



A Standby

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Substantial Reduction in Tuberculosis Death Rate Seen as Gratifying Result of Campaign Covering Period of Years

The marked decline in the tuberculosis death rate of Ohio for the year 1920, indicated by the dislodgement of this disease from second to fourth place among causes of mortality, is the outstanding feature of statistics for last year which have recently been completed and published by the State Bureau of Vital Statistics. This decrease is especially gratifying to the medical profession, the state and local societies for the prevention of tuberculosis and other cooperating agencies, all of which see in it a partial realization of their ambition to materially curtail the inroads of tuberculosis, which not so long ago ranked first among causes of death, through constructive education of the public in its prevention and relief.

Ohio was one of the first states in this country to organize a voluntary association to combat tuberculosis, the Ohio Society for the Prevention being organized in 1902. Beginning with this date the society became actively identified with every measure put forth to control tuberculosis in the state, and as its experience and understanding of the problem grew, its interests widened, until at the present time the society is known as the Ohio Public Health Association to indicate publicly the new work in an enlarged field which the organization promotes.

The Ohio Society for the Prevention of Tuberculosis had its inception in the offices of the State Board of Health in 1902, when funds were raised through membership dues. In addition to the educational work which was carried on, the society initiated legislation providing for a commission to study the feasibility of establishing a state sanatorium for tuberculosis; secured legislation for the establishment of the Ohio State Sanatorium now located at Mt. Vernon; and was largely responsible for the passage of legislation for the establishment of county and later district tuberculosis sanatoriums. The period covered by this work was from 1902 to 1911, in which were laid the foundations for future work which is beginning to yield such gratifying results.

In 1911 the society began a new period in its life due to the advent of the Red Cross Christmas Seal as a means of raising funds for tuberculosis work. It was enabled to employ an executive secretary to devote his full time to the work and a survey of the tuberculosis situation throughout the state was undertaken, with the result that a program of work to be accomplished was adopted. Two very important items in that program were the inclusion of tuberculosis as a notifiable disease by the State Board of Health in 1912 and the appropriation of twenty thousand dollars a year for the establishment of a

bureau of tuberculosis in the State Board of Health organization the following year. This bureau through which the tuberculosis campaign was furnished additional funds provided through taxation, has proved very successful.

As part of the program adopted in 1911 the Ohio Society for the Prevention of Tuberculosis began the development of a state system of public health nursing by advocating the employment of public health nurses by the local anti-tuberculosis societies. Legislation was secured to make it possible to employ public health nurses by county and district tuberculosis hospitals, municipal boards of health and by local boards of education. In the establishment of the bureau of tuberculosis in the State Board of Health in 1913 provision was made for the employment of one nurse as a state supervising nurse. Finally, in the Hughes-Griswold health code, the latest advance in health machinery, the employment of a public health nurse is made mandatory in the local health departments, as is the employment of a health commissioner and a clerk.

The public health nurse who reaches the homes of all classes is recognized as a valuable adjunct in the tuberculosis campaign. In 1911 there were 25 public health nurses employed in nine cities in Ohio and today there are eight nurses in the bureau of public health nursing of the State Department of Health and 654 nurses employed by local health organizations.

Meanwhile the county medical societies have devoted a good share of their meeting programs to the consideration of tuberculosis and the holding of clinics. One of the helpful medical factors has been the tuberculosis school conducted at the State Sanatorium at Mt. Vernon, where physicians from all parts of the state were enabled last year to spend two weeks in reviewing their training in this field and familiarizing themselves with sanatorium methods of treatment. Throughout the spring and summer months a series of tuberculosis clinics have been held in various parts of the state under the joint auspices of the county medical societies, the Ohio Public Health Association and the State Department of Health, with the object of encouraging early recognition of tuberculosis and educating home patients in their proper care, in the absence of sufficient facilities for their sanatorium care by the state.

All of these activities have combined to reduce Ohio's tuberculosis death rate from 114.6 in 1919 to 101.1 in 1921, representing a decrease from 6,542 to 5,944 deaths in those years.

OTHER VITAL STATISTICS

The mortality figures covering all causes of

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death in Ohio last year are replete with interesting points and worthy of very serious consideration. There were 73,843 deaths reported in 1920 compared to 72,592 during the previous year, an increase of 1,251. However, the rate of 12.7 per thousand population remained constant in both years, due to the increase in population in 1920. The rural rate showed an increase from 6.2 in 1919 to 10.8, and the urban rate decreased from 17.1 to 13.5.

Fourty-seven counties and 35 cities had lower rates than the average for the state in 1920. Gallia County was credited with having the highest death rate with an average of 19.2, while Putnam County with a rate of 9.5 was the lowest. The municipality showing the highest death rate (36.6) was Gallipolis, explained by the fact that nearly nineteen per cent. of all the deaths reported from that city occurred at the Ohio Epileptic Hospital. Cleveland Heights again showed the lowest rate, 7.1, but this also is explained by the fact that all hospital cases are taken to the city of Cleveland and deaths recorded as of Cleveland.

Organic heart disease was the greatest single agency of mortality during 1920, causing 8266 deaths, an increase of 607 over 1919. Pneumonia was the second most deadly malady for the year, taking 7965 lives. Other high mortality agencies were cerebral hemorrhage 5964, and tuberculosis 5944.

The following are a few of the causes of death with the number of deaths and the rate per 100,000 population for the two years:

Cause of Death	1920		1919	
	No.	Rate	No.	Rate
Typhoid fever	436	7.4	460	8.0
Smallpox	18	.3	10	.2
Measles	743	12.5	197	3.4
Scarlet fever	372	6.3	135	2.4
Whooping cough	822	13.9	244	4.3
Diphtheria	639	10.9	647	11.3
Influenza	3773	64.1	5767	100.3
Tuberculosis, total	5944	101.1	6542	114.6
Cancer, total	5109	86.9	4891	48.1
Cerebro spinal fever	59	1.0	63	1.1
Cerebral Hemorrhage	5964	101.4	5797	100.9
Organic Heart Disease	8266	142.5	7659	133.3
Pneumonia, total	7965	135.4	7041	123.3
Appendicitis	760	12.9	639	11.1
Chronic Brights disease	4012	68.2	4025	70.0
Puerperal State	976	16.8	822	14.3
Suicide, total	587	9.97	723	12.5
Accidents, total	4391	74.6	4403	77.1
Railroad Accidents	592	10.1	550	9.6
Automobile Accidents	718	12.2	641	11.2
Homicide, total	420	7.1	417	7.4

Sleeping sickness not included in the above list, took a toll of 120 persons in 1920, and it is worthy of mention that 114 deaths from this cause were reported to the Bureau of Vital Statistics during the first three months of the present year, indicating a heavy increase for the year if the prevalence continues. There were 36 deaths from this cause in March, an increase of three over both January and February.

The Bureau of Vital Statistics has spared no effort to make the 1920 compilation complete. One of the unusual features is the following tab-

ulation showing the number of children that died under one day old and the causes of death:

Cause of Death	No. of Deaths
Whooping cough	2
Influenza	3
Syphilis	14
Pneumonia, all forms	14
Congenital malformations	270
Congenital debility	84
Premature birth	1447
Injuries at birth	265
Diseases peculiar to early infancy	139
Lack of care	5
Other causes of death	78

A total of 123,788 births were reported for the year 1920, exclusive of 3,962 stillbirths reported; 5,146 children died under one month of age; 3,763 under one week, and 2,321 under one day; 1,442 lived to be one day old and died before they reached the age of one week, and 1,383 lived to be a week old, but died before they were one month of age.

Juvenile Court Orders Medical Treatment for Child

During the month of May, the health commissioner of Columbus found a child afflicted with diphtheria in a family belonging to the Holy Apostolic Church of Christ. According to the mother the tenets of the church forbade the use of medicines or physicians, and in spite of the pleadings of the health officer she refused to call a physician or to allow antitoxin to be administered. The health officer then applied to the judge of the Juvenile Court, who ruled that as all children were to be considered as wards of the state, it was within the power of his court to order proper medical attention for the child. The mother consented to call a physician, but when he appeared she refused him entry. The judge then sent out several officers of the court, who took the child to the contagious disease hospital where antitoxin was administered and other medical treatment given. The child recovered in due course, but if energetic action had not been taken in the case the mother's neglect might easily have caused death.

Eighth District Meeting July 6

The Eighth District Medical Society will meet in Zanesville, July 6. The interesting program arranged consists of medical and surgical clinics at Bethesda and Good Samaritan Hospitals during the morning; luncheon at the hospitals for the visiting physicians; a business and scientific session starting at two o'clock in the afternoon in the Chamber of Commerce; and a complimentary dinner for out-of-town physicians at the Exchange Club at six o'clock. "Precancerous Conditions of the Cervix" will be the subject of an address by Dr. R. R. Huggins, dean of the Medical Department of the University of Pittsburgh. Dr. Lawrence Litchfield, also of Pittsburgh, will speak on "The Patient Himself."



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ACADEMIES AND COUNTY SOCIETIES

Cleveland

(Lester Taylor, M. D., Secretary)

The regular meeting of the Academy of Medicine of Cleveland was held May 20, at the auditorium of the Cleveland Medical Library.

The first speaker of the evening was Dr. Herman M. Adler, professor of criminology at the University of Illinois, who is at present attached to the Justice Survey in Cleveland. He spoke on "Criminal Behavior as a Medical Problem." Dr. Adler presented a series of slides showing the comparative intelligence of men confined in penal institutions and the soldiers of our draft army. He pointed out that the question of criminal behavior was not a matter of intelligence alone, but that it represented more of a behavior neurosis. Many interesting statistics were presented dealing with the intelligence of our foreign born and negro population and the comparative intelligence of young and hardened criminals. He made an appeal that the problem be put upon a medical basis and not left in the hands of purely emotional workers and partially trained psychologists. He pointed out that the greatest work lay in the line of prevention, especially in childhood and adolescence and as his greatest therapeutic asset for the older criminals he spoke of conversion.

Dr. Adler's very interesting presentation was discussed by Doctors P. A. Jacobs, J. E. Tuckerman and G. N. Stewart. Discussion closed by Dr. Adler.

The second paper was presented by Dr. W. B. Cannon, professor of Physiology at Harvard Medical School, who spoke on "The Nervous Control of Variable Adrenal Secretion" Dr. Cannon was introduced, at the request of the president, by Dr. G. N. Stewart, and he endeavored to prove that it was possible to demonstrate an increased secretion of adrenin by means of the denervated heart in response to sensory nerve stimulation. He asserted, and presented experiments to prove, that not only could the increased secretion be demonstrated but it could be fairly accurately measured. He suggested that the hepatic function during the digestion of proteic food played some as yet unknown part in this reaction.

A large part of this paper was devoted to a criticism of the work and methods of Drs. Stewart and Rogoff. The discussion was opened by Dr. Stewart who asserted that the experiments of Dr. Cannon were not convincing and did not represent as direct a method of attacking the problem as he had used. Dr. Rogoff also took

part in the discussion which was closed by Dr. Cannon.

On motion of Dr. G. W. Crile the Academy extended a vote of thanks to both Drs. Cannon and Adler for their very entertaining papers.

FIRST DISTRICT

Clinton County Medical Society held an interesting series of meetings during the month of May. On the 10th, there was a motion picture demonstration of difficult surgical procedures; on the 17th Dr. Robert Judkins presented a paper on "Vincent's Angina"; on the 24th, Dr. F. A. Peele spoke on "Convulsions," and on the 31st, Dr. Henry Whisler discussed "The Present Status of the Medical Profession."—News Clipping.

SECOND DISTRICT

Darke County Medical Society's meeting of May 12 was attended by 26 members and six guests, including the two essayists, Drs. H. B. Blakey and C. D. Hoy, of Columbus, who presented thoroughly practical and helpful papers. The former's subject was "Diagnosis and Treatment of Nephritis," and the latter spoke on "Fractures," illustrated by lantern slides.—B. F. Metcalfe, Correspondent.

Greene County Medical Society met in the Elks' assembly room, Xenia, April 28, with 14 members present. The scientific program consisted of a symposium on anesthesia, participated in by Drs. P. D. Espey, R. K. Finley and C. H. Denser. Dr. Espey's subject was "Novocaine"; Dr. Finley's "Rectal Anesthesia," and Dr. Denser's "Inhalation Anesthesia for Major and Minor Work Other Than Obstetrical." Dr. L. L. Taylor, who was to have spoken on "Hyoscine" was unable to be present. Dr. R. K. Finley also reported a case in which he had been getting good results with Luminal in the treatment of the symptoms of epilepsy. In a case of Petit Mal in a child one grain of bromide and three-eighths of a grain of Luminal daily caused the child to sleep well at night but did not produce drowsiness in the day time. He added that good results were obtained in a case of Grand Mal by using 1½ grains of Luminal daily. Dr. Finley asked for the experiences of other members with regard to results in epilepsy with this drug, and Dr. D. E. Spahr reported good results in one case with this treatment.—C. H. Denser, Secretary.

THIRD DISTRICT

Hancock County Medical Society held a tuberculosis clinic in Findlay on the afternoon of June 1. Following this a dinner was served for members of the society and their families and invited guests from Wood and Seneca Counties, and in the evening Dr. F. C. Anderson, superintendent of the State Tuberculosis Sanatorium at Mt. Vernon, made an address on "The Prevention and Care of Tuberculosis."—News Clipping.

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Logan County Medical Society held its regular meeting in Bellefontaine, May 13, with an attendance of 15 members. Following the luncheon, good papers were read by Drs. F. B. Kaylor and W. G. Stinchcomb on "Diabetes" and "Eye Manifestations in Diabetes," respectively. Dr. W. C. Pay reported on the proceedings of the House of Delegates during the annual meeting of the State Association. At the meeting of June 3, Mr. Olcott from the home office of the Metropolitan Life Insurance Company gave an interesting talk on the relationship between industrial insurance companies and the visiting nurse idea in conjunction with the kind of work carried on by the different cities through their city nurses. He expressed a desire for close cooperation with the medical profession. Dr. Stinchcomb presented two instructive tonsil cases and Dr. L. C. Pratt a case of congenital lymphatic leukemia. Twenty members were present at this meeting.—M. L. Pratt, Secretary.

Marion County Medical Society, in session at Marion, June 7, heard a paper on "Goiter" by Dr. Joseph DeCourcy of Cincinnati. Dr. DeCourcy showed motion pictures of an operation for thyroidectomy and others demonstrating inguinal herniotomy under local anesthesia. Preceding the scientific program there was a short business session. Attendance 25.—J. A. Dodd, Secretary.

Mercer County Medical Society had as its essayists on May 10, Drs. J. P. Symons of Rockford, and Dr. T. R. Terwilliger of Lima. Dr. Symons spoke on "Malnutrition in Children," and Dr. Terwilliger on "Differential Diagnosis of Lesions of the Right Side of the Abdomen," and both papers were freely discussed.—News Clipping.

FOURTH DISTRICT

Defiance County Medical Society, in regular session at the residence of Dr. D. J. Slosser, Defiance, June 8, heard an extremely interesting paper on "Cardiac Arrhythmia" read by Dr. J. J. Reynolds. Drs. G. W. McCaskey and M. M. Edlavitch of Fort Wayne, guests of the society, followed with explanatory talks on "The Use of the Polygraph and Electrocardiograph." After a repast, gracefully served by the hostess, a discussion of the paper read and the talks given was indulged in by the members.—W. S. Powell, President.

Fulton County Medical Society held an enthusiastic meeting at Wauseon, May 20, with 22 physicians present. Drs. E. G. Galbraith and H. L. Wenner, Jr., of Toledo were visiting essayists of the occasion, the former speaking on "Latent Tonsillar and Peritonsillar Abscesses," and the latter on "Empyema." The program also included excellent papers on "An Interesting Heart Condition" by Dr. Harold Heffron, Metamora, and "Apriri," by Dr. E. A. Murbach, Archbold.—News Clipping.

Henry County Medical Society met in McClure, May 13. A splendid paper on "Pregnancy" was read by Dr. I. H. Boesel, and Dr. H. J. Powell, Bowling Green, gave a timely talk on typhoid fever. A banquet was served at which covers were laid for 17, including guests from Wood and Fulton Counties.—News Clipping.

Sandusky County Medical Society held its fifth regular meeting of the year in Fremont, May 27, with about fifty per cent attendance. Dr. O. C. Vermilya presented an instructive paper on "Milk," in which he made a plea for its more general consumption by those of all ages. Reference was made to the value of "milk and honey." Pasteurized milk was compared to raw milk and the essayist declared in favor of the latter, provided it be prepared under cleanly conditions; otherwise pasteurized milk with fruit juices added to supply the defects occasioned by heating, was the choice. Discussing the subject of "Diet," Dr. F. L. Moore made special reference to the fact that many prepared foods are inadequate, as proved by Dr. Cashmir of Poland in his experiments with rice. Following reading of the papers there was a free-for-all discussion lead by Drs. Beck, Thomas and Booth. Dr. Thomas made a plea for a sheet anchor in all diet work. He met the contention that pasteurized milk is not as good as raw with the statement that the pasteurization process is often faulty. The society voted to take Wednesday afternoon as a half holiday during the summer months and vigorously voted down a motion to discontinue regular meetings during this period.—C. I. Kuntz, Secretary.

FIFTH DISTRICT

Ashtabula County Medical Society held its 145th regular meeting at the Hotel Ashtabula, May 10. After an enjoyable dinner, there was a brief business session in which Drs. F. C. Combs and N. H. Osborne were elected to membership; report was made of the proceedings at the annual meeting, and legislative measures were discussed. Resolutions were passed supporting an ordinance requiring pasteurization of milk.—J. J. Hogan, Secretary.

Lorain County Medical Society met at the Elyria Y. M. C. A., May 10. Dr. A. B. Smith of Cleveland, formerly of Elyria, gave a talk on "Relationship of Roentgenology to the Internist in the Field of Diseases of the Chest," illustrated with lantern slides. Dr. S. V. Burley reported on the state meeting.—W. E. Hart, Secretary.

Trumbull County Medical Society, meeting in Warren, May 19, had as its guest Dr. Walter G. Stern, Cleveland, who presented an interesting paper on "Fractures," which he illustrated with lantern slides. The attendance included members from Kinsman, Niles, Girard and Warren.—J. D. Knox, Secretary.



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SIXTH DISTRICT

Stark County Medical Society met in Canton, May 17. The principle feature of the business session was the adoption of a new constitution. The scientific program included papers on "Constitutional Nervous Symptoms," by Dr. J. D. O'Brien; "Pyelitis in Infants," by Dr. Fred King; and a gynecological paper by Dr. L. F. Mutschmann. Discussion on the first two papers was opened by Drs. H. C. Eyman and L. E. Leavenworth, respectively.

Summit County Medical Society's meeting of May 10 was attended by 72 members from Akron, Copley, Cuyahoga Falls, Kenmore and Wadsworth. Dr. B. E. Miller was the essayist and his subject was "Endocrine Organotherapy," the discussion of which was opened by Drs. A. S. Robinson and J. N. Weller. The June 14 meeting was held at the People's Hospital. The program: 1. "Anaphalaxis and Disease," T. H. Baughton; discussion opened by Dr. V. D. Keiser. 2. "Local Goitre," by Drs. J. L. DeCourcy and I. W. Abrahamson, Cincinnati.—A. S. McCormick, Secretary.

EIGHTH DISTRICT

Athens County Medical Society was entertained by its Nelsonville members at the office of Dr. A. L. Pritchard on May 17. No attempt was made to conduct a business session, the evening being turned over to the enjoyment of a splendid chicken dinner and a theater party at which the reel, "The Ol' Swimming Hole," was featured. Dr. S. E. Butt entertained with several of his latest poems which were much appreciated.—H. M. Taylor, Correspondent.

Muskingum County Medical Society held its regular meeting in the Zanesville Chamber of Commerce, June 8. Dr. T. L. Sutton read a paper on "Undescended Testicles," with report of cases.—M. A. Loebell, Secretary.

NINTH DISTRICT

Scioto County, Hempstead Academy of Medicine, met in regular session at Portsmouth, May 9. The following program, constituting a symposium on obstetrics, was rendered: "Prenatal Care," Dr. Oscar Mickelthwaite; "Modern Management of Labor," Dr. Albert Berndt; "Caesarean Section: When Indicated," Dr. A. R. Moore; "Eclampsia," Dr. J. D. Jordan; "After Care," Dr. W. A. Quinn. Discussion was lead by Dr. W. W. Smith.—Harry E. Rapp, Secretary.

CLINIC BUILDING AND HOSPITAL

The Boulevard Hospital and Clinic Company, a recently incorporated Cleveland company headed by Drs. A. F. Spurney and James Stotter, has acquired a site for a \$250,000 hospital building and clinic, plans for which are under consideration. Preliminary plans contemplate the erection of a 150-room building of modern fireproof construction.

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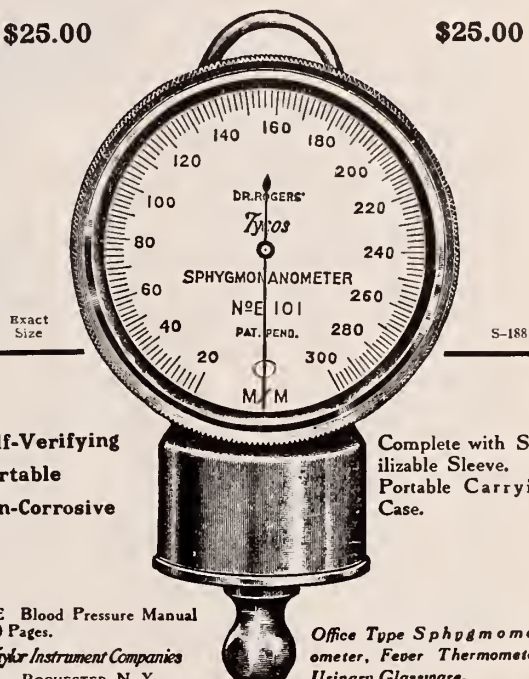
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Physician with Brilliant Scientific and Administrative Record Becomes Dean of One of Ohio's Medical Schools

Warm expressions of commendation and approval from throughout the state followed the appointment early in May of Colonel Henry Page as the new dean of the Medical College of the University of Cincinnati. Colonel Page has already assumed the chair held by Dr. J. C. Oliver, professor of surgery at the University, as acting dean since the death in February, 1920, of the late Dr. Christian R. Holmes.

Colonel Page has made a distinguished record in the medical profession. He is the son of Justice Henry Page of the Maryland Court of Appeals and was born in Maryland fifty years ago. In 1891 he graduated as Bachelor of Arts from Princeton University.

He then entered the University of Pennsylvania, where he obtained the degree of Doctor of Medicine, graduating in 1894. Other schools from which he graduated are the Army Medical School, at Ft. Leavenworth, in 1913. In 1894 the degree of Master of Arts was conferred upon him by the Princeton University, and in 1918 the honorary degree of Doctor of Public Health by the University of Pennsylvania in recognition of his services during the World War. This was the only degree of its kind conferred by the University of Pennsylvania on any save a member of the faculty or a graduate.

Colonel Page served in the Spanish-American War as commander of the general hospital at Corregidor, Philippine Islands, as health officer of the ports of Manila and Cavite and as assistant to the chief surgeon of the Philippine Islands during an insurrection.

Prior to the World War he was identified with the formation and instruction of the Medical Reserve Corps, and instruction of militia as inspector and instructor. For six years he conducted training camps for reserve and militia officers at Raleigh, North Carolina; Ft. Oglethorpe, Tobyhanna, Plattsburg and elsewhere. His largest camp was Greenleaf, where he had

medical command of 13,000 officers and men. This camp he organized and commanded until shortly before the time he was ordered to France. In this camp he instituted new methods, training men for military service and medical diagnosis to fit them for broad service.

In France, Colonel Page built and commanded the Rimaucourt Hospital center of 1,000 beds, and later was selected by General Pershing to be his medical inspector. When he returned from France he was given command of the general hospital of 4,000 beds at Ft. McHenry and also the general hospital for tubercular soldiers at Denver, Colorado.

Colonel Page is a Fellow of the American Medical Association, of the American College of Surgeons, and of the Maryland Academy of Natural Sciences, and is a member of the Far Eastern Tropical Association and numerous other societies in various parts of the world.

In educational work he has had experience in organizing the special training camp at Greenleaf and a school for the vocational training of soldiers at Fort McHenry, Baltimore. In Americanization work, Colonel Page specialized in teaching sociological subjects relating to the control of men, a new subject in army training.

Speaking for the Cincinnati profession, *The Cincinnati Journal of Medicine* said editorially of Colonel Page's appointment and his succession to the place filled so brilliantly by the late Dr. Holmes:

"The unfinished plans of this builder come as a bequest of Herculean labors to his successor, but there is every reason to expect that Henry Page will be equal to the task. A man with an enviable administrative record, with ideals in medical education, which twenty-five years' contact with the Army seems not to have destroyed, and with scientific accomplishments to his credit which have won for him the bestowal of the honorary degree of Doctor of Public Health from

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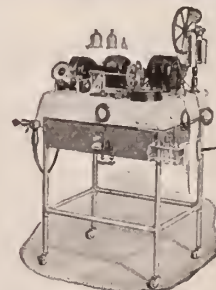
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A diet that meets the condition is prepared as follows:

Mellin's Food		4 level tablespoonfuls
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Feed small amounts at frequent intervals.

It is further suggested:—As soon as the stools lessen in number and improve in character, gradually build up the diet by substituting one ounce of skimmed milk for one ounce of water until the amount of skimmed milk is equal to the quantity of milk usually given for the age of the infant; also that no milk fat be given until the baby has completely recovered.

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the University of Pennsylvania, the new dean is endowed with the proper qualifications for the work in hand. His promise for the future is written in his record and in the opinion of the men and officers who knew Henry Page as a colonel in the army. . . ."

The following statement made by Major Henry Ladd Stickney, supervisor of the seventh district of the United States Public Health Service, with headquarters in Cincinnati, gives a representative opinion of Colonel Page held by his Army associates: "I am one of the thousands of doctors that came under his inspiring influence in training at Camp Greenleaf. No man has a wider acquaintance in the American medical profession, or is more highly admired than Dr. Page. It is a pleasure to work with him. I know of not a single instance where he had to use the court-martial with any of the thousands of doctors he trained—he enthused the men into the right attitude toward their work."

County and City Health Agencies Combined

Consolidation and coordination of county and city health activities in Akron and Summit County resulted from the appointment, June 1, of the county health commissioner, Dr. Don Shira, to succeed Dr. C. T. Nesbitt, resigned, as city health officer.

On announcement of Dr. Shira's appointment the Summit County Medical Society held a special meeting in his honor. In an interesting address, in which he characterized the combination of the two departments as a desirable and progressive step tending to eliminate duplication of efforts of city and county health officers, Dr. Shira briefly outlined the program of consolidation under which he will direct the health work of both the county and the city. He declared himself in favor of a larger plan of health conservation among school children and a continuation of baby welfare work, together with the maintenance of properly conducted clinics, and urged the cooperation and assistance of all citizens and agencies interested in health and welfare work. At the conclusion of the meeting the following resolution was unanimously adopted:

"Members of the Summit County Medical Society take this opportunity of pledging to you and to the county and city health boards their loyal and unwavering support in all public measures wherein their assistance and cooperation may be service.

"We pledge our support to all properly conducted clinics and affirm our belief in such clinics as public health agencies.

"We stand behind you as a unit and if you need us in any public emergency or in caring for those unable financially to afford medical attention we are at your call without money and without price."

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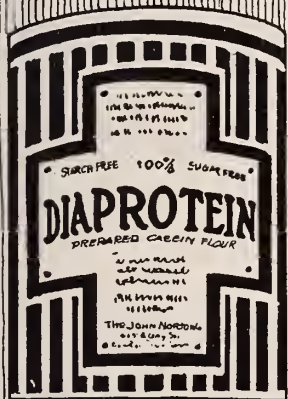
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OHIO HOSPITAL NOTES

—Steps have been taken by Fostoria to secure a bequest left the city five years ago by a late resident as an endowment fund for a hospital, on condition that the city raise an additional sum of \$25,000 for its erection. The latter sum is more than covered by property bequested the city for hospital use by another deceased resident.

—Announcement has been made that the staff of Hempstead Hospital, Portsmouth, has been reorganized and that an extensive program of improvement will be started. The new staff consists of Drs. S. S. Halderman, president; W. A. Quinn, vice-president, and W. A. Ray, secretary-treasurer. One of the new features of the reorganization is a house committee whose duty it is to study conditions at the hospital with the object of attaining most efficient service.

—Contracts totalling more than \$78,000 for equipment and furnishings of the new Youngstown municipal hospital have been approved by the city council.

—At the Akron Children's Hospital a medical clinic has been established for the care of indigent children. The clinic is open for one hour on Wednesday and Saturday of each week.

—A movement is on foot among civic, religious and social organizations in Marietta to erect a municipal hospital as a memorial to the soldier dead of that city and Washington County. A hospital unit for the treatment of ex-service men, established in Marietta, June 1, by the United States Public Health Service, is under the direction of Dr. John W. Hill.

—In view of the fact that the recent hospital and health survey of Cleveland demonstrated the urgent need of increased hospital facilities, particularly in the district in which St. Luke's Hospital is located, that institution has opened an out-patient department which will accommodate between 20,000 and 30,000 emergency and short-time patients annually.

—Miss Elizabeth Williams, formerly superintendent of the hospital at Martins Ferry, West Virginia, is the new superintendent at Warren City Hospital. She succeeds Miss Mary E. Surbray, who has accepted a similar position at Peoria, Illinois.

—During the Mississippi Valley Conference on Tuberculosis in Columbus in mid-September sanatorium physicians in attendance will spend a day in inspecting the State Sanatorium at Mt. Vernon.

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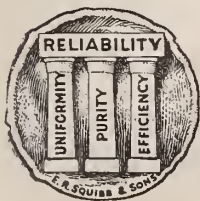
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1. Suprarenalin 1 part
Zinc Stearate (Comp)..... 100 parts
Heavy Magnesium Carbonate..... 900 parts
 Mix Triturate well.
2. Suprarenalin 1 part
Zinc Oxide..... 100 parts
Bismuth subcarbonate..... 400 parts
 Mix Triturate well.
3. Suprarenalin gland substance..... 1 part
Zinc Stearate..... 20 parts
Zinc Oxide..... 80 parts
 Mix Triturate well.
4. Suprarenalin 1 part
Bismuth subcarbonate..... 300 parts
Zinc Oxide..... 300 parts
Zinc Stearate..... 200 parts
 Mix Triturate well.

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Cocainae hydrochloridi.....	15	or	grs. iiss
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Suprarenalin Sol. (1:100).....	4	or	3 i
Glycerine	2	or	3 ss-
Aqua Camphorae ad.....	30	or	3 i

M. Sig. Use as a spray to the nose four or five times daily or oftener if needed.

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EDITORIAL COMMENT

by D. K. M.

Introducing Ohio's New Health Director

As the chief of the state's health service, *The Journal* is pleased to introduce to its readers and to his fellow members in the Ohio State Medical Association, Dr. Harry H. Snively, of Columbus, director of health under the new administrative reorganization code which became effective July 1, and pledges to him all possible cooperation and assistance.

With his many years of experience in administrative and executive positions, building on the foundation health laws second to no other state in America, and with the nucleus of an organization based on these regulations largely made possible by the vision of his predecessor, supported by an enlightened public opinion, and with the assistance of the medical profession of which he is a leading member, Dr. Snively's opportunity for continued public service is encouraging and auspicious. Dr. Snively who at the time of his appointment by the Governor was surgeon general of the Ohio National Guard, as director of public health succeeds the former health commissioner under the present system, and will also have in his division the bureau of vital statistics, previously a department under the secretary of state, as well as the state plumbing inspection work.

The public health council, created in 1917, con-

tinues with the same powers formerly had excepting the appointment of the executive head of the department, which the reorganization law vests in the governor, and the creation of divisions and prescribing of qualifications of chief of divisions, which the new law gives to the director.

Dr. Snively long has been a well known Columbus physician. He was born 52 years ago at Brownsville, Licking County; taught school, was graduated from Ohio State University, studied medicine, was faculty member at Starling-Ohio Medical College and later the College of Medicine of Ohio State.

In 1915 he had charge of American Red Cross work in Russia, attaining the rank of brigadier general. When the Ohio National Guard was mobilized for Mexican service he returned to his command in the Guard. Later he went with the Twenty-seventh Division to Europe. At the close of the war he directed health inspection work at the Bordeaux embarkation depot. Again, in 1919 he was assigned chief of staff to the American Red Cross expedition to combat typhus in Poland.

Honor citations and medals were given him by the Russian, Belgian, American and Polish governments.

Last fall, upon his return from Poland, he was placed in charge of surgical, medical and sanitary work for the Ohio National Guard, with the rank of colonel.

The retiring state commissioner of health, Dr. A. W. Freeman, takes up his new position as resident lecturer in public health administration in the school of hygiene and public health at Johns Hopkins University, Baltimore, with the best wishes and sincere appreciation not only of his fellow physicians in Ohio, but his host of other friends.

In assuming his new position, Dr. Freeman is returning to his alma mater. He came to Ohio in 1917 to become the first commissioner of health under the new law passed that year. With the exception of six months' service as major in the medical corps of the United States army, he has been continuously in charge of the state's health work.

Previous to coming to Ohio he was epidemiologist in the United States public health service, and prior to that was assistant health commissioner of Virginia. He is a native of that state.

Dr. Snively has retained as his first assistant in the division of health, the former deputy health commissioner, James A. Bauman, who has served in that capacity for about sixteen years, and who is a recognized authority on health laws and regulations, and their administration. He, as well as his chief, has the best wishes and most sincere pledge of cooperation from *The Journal*.

We are a New Thinker when well and an allopath when sick.—Bob Ryder in *The Ohio State Journal*.

"Your Brother's Keeper"

There is no profession unless it be the ministry in which an offending member may do so much damage to his fellow members as in the medical profession.

Just as the rare cases of neglect and improper services rendered by a careless physician create in the minds of large groups of the public a distrust for the entire profession, to an even greater degree does a wilfull and definite offense committed by one or a few individuals against law and against the best thought and highest ideals of the profession, react to the detriment of every conscientious, sincere physician.

Just as in recent months a small fraction of one per cent. of the medical profession has violated either the letter or the spirit of the law and acted contrary to the best thought of his profession in the dispensing or prescribing of excessive amounts of narcotics or intoxicants, has created in the public mind a less high regard for the entire profession, so have repeated offenses by a small group of Ohio physicians cast reflection on the entire group by their dealings with the Ohio Industrial Commission.

Within recent weeks medical claims have been submitted for one or two operations which were never performed; claims have been made for calls and treatments in individual cases many times in excess of the actual service. In some instances the patient has been induced to compensate the physician directly for his services, and then such physician has collected twice by submitting the claim as an industrial case under the workmen's compensation law.

The peculiar and abnormal attitude of this small group of offenders is indicated by the statement of one of them when confronted with possible prosecution, that he had returned the excessive amount to the Industrial Commission and that should be the end of it.

Likewise, every malpractice suit brought against an individual physician reflects possible discredit on many others, and yet a recent case shows that one physician encouraged a damage suit against another without reason, and even against the best judgment of the patient, purely from malice.

If laws and regulations are sometimes irksome to the group as a whole it can be remembered that practically all stringent rulings by state and federal departments have been made because a few unscrupulous ones took advantage of a more generous spirit and less exacting interpretation of existing law.

Law And Its Enforcement

Readers of *The Journal* will remember the publication in the June issue of the unanimous decision of the Supreme Court in dissolving the chiropractic injunction suit, in upholding the medical practice laws and vindicating the State

Medical Board, in its administration of the laws.

It could naturally be assumed that under these conditions the laws of Ohio enacted for the purpose of protecting the sick public against unlicensed charlatans and fakirs could now be enforced. The original complainants in the suit—the unlicensed chiropractors—however have gotten together another "purse" and have carried the case to the Supreme Court of the United States; with apparently no expectation that the decision will be modified or revised but with the obvious purpose of delaying the application of Ohio's laws. Indeed it is scarcely to be expected that that high court will review a decision unanimously rendered by the Ohio Supreme Court, but at least until the United States Supreme Court reconvenes after its summer vacation and decides to hear the case, the original injunction issued by the Common Pleas Court and since reversed by the Court of Appeals and the Supreme Court of Ohio holds against the State Medical Board and prevents that body from prosecuting unlicensed chiropractors. That the latest action by the chiropractors is not in good faith is proved by a communication from the financial secretary of the Ohio Chiropractic Association to B. J. Palmer, so-called "Fountain Head" of chiropractic at Davenport, Iowa, in which the following statements are made:

"There will be no further attempt at legislation during this session or for the next two years, therefore Ohio is an open state and I would appreciate your assistance in sending as many of the boys to Ohio as possible. With the decision of the Supreme Court against us, arrangements have been made to carry same to the United States Supreme Court if necessary, where the case will be held up for at least two years more. We are very anxious to double the number of chiropractors in the state and ask that you co-operate with us in every way possible in sending the boys to Ohio."

In commenting on the Ohio situation, Palmer says: "Now the darn fools are going to bleed themselves some more to give somebody else a few more thousands to waste more time to take it on up to the United States Supreme Court. It will be the same tale about five years more from now." * * * * "Ohio chiropractors—or those who are still seemingly running that association—have much to learn on how to play the game to win. They are playing all around, but fear hitting the nail square."

The foregoing quotations are taken from a recent issue of "Fountain Head News," owned and edited by "B. J., Himself."

A most ridiculous and anomalous feature of the situation is that while both the Court of Appeals, which passed on the case, and the Supreme Court of Ohio, have unanimously upheld the constitutionality of the medical practice and limited practice laws, and completely vindicated the State Medical Board in its regulations and

activities, the Board itself because of the present legal technicality, cannot proceed against this particular class of unlicensed practitioners although the law is so clear, and the legal opinion so conclusive that local authorities may, and are presumed to continue to prosecute offenders against the health and welfare of the citizens in each community or local jurisdiction.

Care of Crippled Children

The statute enacted by the legislature providing for the care and treatment of dependent crippled children under eighteen years of age, to be placed by juvenile courts in the care of the Board of State Charities, becomes operative on August 17.

In all probability an advisory committee will be appointed, representing the Ohio State Medical Association and other groups especially interested.

While plans have not been definitely determined for carrying out the provisions of this new law—Senate Bill No. 174—in all probability a series of conferences will be held for a thorough explanation of the law to the probate and juvenile court judges, to secure the interest of county commissioners and budget commissioners for inclusion in the general fund of the next county tax levy an amount which will provide for the care and treatment of a sufficient number of indigent crippled children during the coming year. It has been estimated by the Institute for Public Efficiency and the Board of State Charities that the following amounts probably will be necessary from the several counties: Cuyahoga and Hamilton counties, \$7,500 each; Lucas, Franklin, Montgomery, Summit, Mahoning and Stark counties, \$5,000 each; for other counties \$1,000 to \$2,500 each.

The foregoing estimate is based on the experience of the Board of State Charities during the past year, which indicates that the average cost of a single case will probably be from \$400 to \$500. On this basis \$1,000 annually in the smaller counties would provide for the two or three indigent cases not at present known to the authorities, nor properly cared for. The figures set forth are of course only a general guide and are expected to require modifications according to local conditions.

A Comparison

Quite frequently our own blessings are not sufficiently appreciated until compared with the misfortune of others. Thus far Ohio has been a fairly enlightened state. Its laws while too numerous have in the main been constructive, and properly conservative rather than radical and destructive.

A recent issue of *The Journal of the Oklahoma State Medical Association* declares that the recent legislative session in that state "goes into

the discard as having enacted more legislation detrimental to the advances of medicine, healing, and public health than any predecessor."

As an example of what a state legislature should not do "through complete ignorance of its duties and obligations to the public at large," the following acts by that legislature are enumerated by the *Oklahoma Journal*:

Create a separate board for the chiropractors.

Create a separate board for the osteopaths.

Enact requirement that newborn children should receive immediate instillation of 1 per cent. silver solution in the eyes, excepting those objecting by reason of religious scruples.

Refused to pass law for examination of cooks, waiters and food handlers to determine freedom from venereal infection. Likewise rejecting provision for establishment of baths in schools with more than two hundred pupils. This latter, also killed by Christian Scientist objections.

Cut every appropriation proposing maintenance of public health agencies to the limit of the ridiculous.

Booted every soldier relief proposition over the field, in the end doing nothing, aside from purchasing makeshifts as a salve to the ill and wounded soldier.

New Occupational Disease Law

The new law including compensation for certain occupational diseases under the workmen's compensation law previously mentioned in *The Journal* and analyzed in detail in the last issue, will become operative on August 3. The members of the Ohio Industrial Commission have indicated a spirit of cooperation in working out these details with the medical profession and other interested groups.

Present laws require the reporting of occupational diseases to the state department of health, but the new law is especially mandatory in requiring the reporting of diseases enumerated in the law, to the Industrial Commission within 48 hours after being diagnosed as such, by any physician. While this regulation may appear somewhat irksome, it should be borne in mind that there will be a possibility from some kind of diseases of serious results or early death, and that in case of controversy, an examination of the patient or his body if deceased, can be made by the Industrial Commission before an award is justified.

Such early reporting is also necessary in order that in each case the Industrial Commission may notify the employer of such illness of an employee. Reports by physicians are to be made on blanks to be furnished by the Industrial Commission. These blanks and other forms had not been drawn at the time this was written, but the Industrial Commission and its medical department expected to be prepared for the administration of the law by August 3.

(Continued on Page 572)

My Conception of The Ohio State Medical Association's Policy on Anesthesia*

By Wells Teachnor, M.D., President

In adopting a firm and definite policy in opposition to the nurse anesthetist and repudiating the survey of the special committee, the State Association through its House of Delegates, has made clear in almost unanimous terms to the officers of the Association the course they must pursue on this subject.

The constitution provides in Section 3, Chapter VII, that "The Council shall be the executive body of the House of Delegates between sessions and shall act in its stead and with the same powers conferred on the House of Delegates by the constitution." But it does not confer on this body the authority or power to abrogate any action previously taken by the House of Delegates.

Immediately after the annual meeting the officers communicated to the members of the legislature the action of the House of Delegates in supporting Senate Bill 184 then pending, and in all other proper ways made a conscientious attempt to repeal the existing law empowering the nurse to administer anesthetics, but were met with the rush of the closing hours of the legislative session by unsurmountable opposition.

It certainly is to the interest of the public that professional ideals be maintained and that progress in medical science be encouraged rather than to extend its practice to agencies of uncertain and limited qualifications.

The action of the House of Delegates should not be construed as an attempt to belittle the intellectual powers of women or to place limitations on her attainments, nor to deprive the nurse of offices of trust and confidence, but a law legalizing the administration of anesthetics by nurses with the limited requirements of the course prescribed for them is not in harmony with the educational ideals of our profession. It is inconsistent that physicians should be made to compete with a six weeks' course as laid down for the nurse in anesthesia.

To place one with such qualifications in absolute charge of such an important surgical adjunct is too serious a proposition to merit the professional support. It is true that they will pass a sort of preliminary examination showing their ability for such work, but still they possess only partial knowledge. The extension of this privilege to the nurse is not in harmony with, and certainly invalidates one of the principal objects of our profession—"the prevention and cure of disease and prolonging and adding comfort to life."

Indeed the nurses of Ohio reasonably should be expected to oppose the present law and join with the medical profession in insisting on its repeal. By far the greater majority of nurses realize the importance of the work in their

proper field and resent any effort to exploit them outside their regular and qualified functions.

It is foolish to say that sufficient medical anesthetists cannot be secured and that the employment of nurses must be resorted to; for a proper encouragement to the specialty of anesthesia and an adequate remuneration for such service will readily solve any apparent dearth of medical anesthetists.

We should develop and encourage a constructive plan which would be an incentive for our members and which would increase professional interest in the subject of anesthesia rather than lessen the morale of the profession by extending a certain practice to outside agencies which belong as much to the doctor as appendectomy and Cesarean section. I am now convinced that the existing law means increasing inferior service to the public and a gradual retrogression of the practice of medicine.

With the matter definitely settled as a policy of the Ohio State Medical Association, the controversy insofar as the Council is concerned, has ended, and it now devolves upon Council and the officers of the State Association to lay plans for the final consummation of this trust.

It should be borne in mind that the committee to be appointed, on authorization by Council pursuant to the request of the Ohio Public Health Association, will not be authorized to alter the policy now so clearly established; but to present such policy to the other interested groups for their information and guidance on a public health question.

Any new information secured and the result of conferences may properly be submitted to the House of Delegates for its disposition at the next annual meeting. But at least until that time which will mark the expiration of my term as president of the Association, I pledge strict adherence to the mandate of the profession as set forth in the formal action of the House of Delegates at the last annual meeting in May.

Pursuant to the action of Council in authorizing the appointment of a committee to represent the position of the Ohio State Medical Association on this and other general health subjects, as requested by the Ohio Public Health Association, it is my intention to select members who represent the best thought of the profession and whose sincere and earnest efforts will be in line with the Association's policy.

Without consulting these men as to their personal ideas, but knowing from their past interest in and conscientious efforts toward the highest professional ideals, that they will constitute a representative committee, I appoint the following members: Drs. C. W. Waggoner, Toledo, chairman; W. D. Porter, Cincinnati; D. C. Houser, Urbana; J. A. McCollam, Uhrichsville; W. A. Galloway, Xenia.

*The foregoing statement as a formal communication was submitted at the meeting of the Council of the State Association in Columbus on July 10, and was adopted and ordered published by the Council. (See minutes of Council, page 592).

The Psychic Element in Anesthesia*

Joseph Rilus Eastman, M.D., Indianapolis, Ind.

Professor of Surgery, Indiana University Medical College.

Editor's Note.—The aim of Dr. Eastman in his address is to show that in psychic domination the profession has an invaluable adjunct in anesthesia, especially regional anesthesia, and that its more extensive employment would contribute to the improvement of surgery and the common welfare. Aside from what Albutt calls the "personal ascendancy of the physician," Dr. Eastman details the many little things which in the aggregate go to make up the patient's psychic environment which is so essential to satisfactory operating under local and regional anesthesia. While the use of conversation, encouragement, music and other diversions help materially in keeping the patient's mind off the operative procedure, success can only be achieved if the anesthesia is absolutely and entirely pain-obtunding. Despite the tendency in medical practice to the materialistic attitude there is much to be said about the influence of suggestion and the time would seem ripe for the introduction of psychology in the medical course in order to give those in the profession the value of its use in all phases of practice.

MY AIM in this paper is to show that in *psychic domination* we have an invaluable adjunct in anesthesia, especially regional anesthesia, and that its more extensive employment would contribute to the improvement of surgery and the common welfare.

It is of the utmost importance to regard an operative surgical undertaking, not simply as a technical, manual performance beginning with the incision and ending with an aseptic dressing, but rather as comprehending every step from the surgeon's introduction to the patient to the end of post-operative follow-up correspondence.

PERSONAL ASCENDENCY OF THE PHYSICIAN

It is always desirable and, as a rule, possible to impart to the patient at the first meeting an enlivening sense of security, to allay, to some extent, the phobias and delusions, and to establish confidence by what Clifford Albutt calls the "personal ascendancy of the physician."

The most successful surgeons instinctively (which as Schofield notes, means simply by the action of the unconscious mind) adapt themselves in voice and manner to the needs of the patient before them. This natural gift is without doubt a great secret of success.

PSYCHIC ENVIRONMENT

As to the operation itself, gentleness in its performance should have a broad interpretation. Thus, the transportation of the patient to the operating room should be made pleasant and comfortable, insofar as it is possible to do this.

The terror of the operating room and the bad impression which the patient receives, owing to the observation of everything connected with the operation, are removed or eliminated, if a mild, pre-operative narcotic be employed.

In the operating room the patient should find all those conditions which conduce to a quiet, tranquil "mood." This embraces many things; for example, the temperature, which should be so gauged as to attract no notice, being neither un-

comfortably low nor annoyingly high. The illumination, if mellow, conduces to tranquility. Too strong a light will irritate as definitely as the noise of one scratching upon glass. A strong light, even if natural sunlight, is not always a good light and intensely brilliant illumination annoys the patient as well as the surgeon. It is not enough just to have light in the operating room. Light is a raw material. What is needed is illumination, which is light controlled and directed, not merely spilled around. Raw light spilled into a room inevitably does two bad things—it makes glare and it makes black shadows. Both glare and shadows disturb the sensorium and interfere with vision.

In artificial illumination blue glass surrounding the source of light, correctly directed, provides a soft white, diffused artificial sunlight, most agreeable to surgeon and patient.

An atrocity of the operating room is the glaring white wall. Every layman knows how the glistening snow destroys visual efficiency and yet for years we provided this blinding white glare, with its disturbing reflexes, as an essential feature of the surgery. Turn a light full on a mirror and all one sees is a dazzling glare. Light reflected from a glossy white wall has the same effect—the glare shines directly into the eye and dazzles the little cameras of the retina—the pupils contract and the eyes are strained. The soft flat, light gray of the sky, if used on the walls without gloss or varnish, contributes to a restful "mood."

OTHER PRECAUTIONS

While it may arouse suspicion in a patient about to undergo an operation under local anesthesia to cover the eyes so that nothing is seen of the operating room, it is usually agreeable to the patient to have the eyes covered with a piece of cool, moist gauze during the operation itself.

If the operating table is under a skylight, or under the source of artificial illumination, this step of covering the eyes, conduces directly to repose and inclines the patient's thoughts away from the surgical operation itself.

The ventilation of the surgery should receive

*The Address in Surgery presented before the General Session of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4, 1921.

interested attention. Fresh air in abundance is a vital necessity. Assistants and visitors crowding over the patient consuming the major part of the available oxygen, do harm. All of us have seen patients in actual air hunger as a result of this indiscretion. Obviously leaning upon the patient's chest as practised occasionally by operator and assistants during general anesthesia will be intolerable in the case of a conscious patient. The same oppression may be caused by allowing many heavy artery clamps to remain on the neck or chest.

One learns at the beginning of the use of regional anesthesia that to place the patient upon a hard metal table is an unnecessary cruelty. If the table is not made soft by pillows, there will be complaint of discomfort, and this can be corrected without, in any way, impairing the aseptic technique, even of those who, before operating, are accustomed as Dr. Mayo says: "to incant the pagan gods of asepsis." A comfortable posture can always be provided, if the surgeon so wills.

Another source of annoyance and irritation to the patient is noise. The dropping of a pan, the clanging of instruments or the blowing off of an autoclave during regional anesthesia is no less than a crime. Likewise, talking in the operating room should be kept at the irreducible minimum, excepting that engaging and diverting conversation between the patient and a low voiced nurse or assistant, may be helpful. This is an operating room note. Several of our patients have asked us not to talk. At the Mayo clinic, as you will recall, no visitors are present while anesthesia is being induced. Regional anesthesia is put to the severest test when used in the teaching clinic. It is favored by soft voiced, well behaved assistants and silent visitors.

The old motto of the operating room, "*Noli loqui noli tangere*," deserves firm observance—and yet it is doubtful whether uncanny silence is good, rather let us ask that all speech be low in tone and limited to those directly concerned in the work, as Chutro demanded in his hospital in France.

COCAINE LOQUACITY

It is, I presume, clear that the use of cocaine, alone or as an adjuvant to novacaine, may militate not infrequently against the preservation of a serene state of mind. I have observed this in supra-pubic prostatectomies after dropping cocaine into the bladder to anesthetize the mucosa. The stimulation of cerebration, the sharpened special senses, the loquacity and anxiety very promptly coming into evidence as embarrassing agencies. The lesson here is not far to seek. It is to avoid the use of cocaine wherever possible.

ABSOLUTE ELIMINATION OF PAIN

It is a profitable expenditure of time and patience to guard against the infliction of even the slightest pain, at the beginning of the induction of local anesthesia, and to this end it seems worth

while to blanch the skin over a very small area with an ethyl chloride spray before the first introduction of the needle, or if the skin be loose enough, to benumb it by pressure between the thumb and forefinger of the operator's left hand, the first puncture being made with a small hypodermatic needle into the skin thus compressed. It is the painstaking attention to such minor details which establishes confidence and sympathy and renders this work fairly fascinating to the patient and surgeon.

It is in my experience undesirable to question the patient at frequent intervals as to whether pain is being perceived. This applies especially in the case of suggestible individuals. The patient may thus be suggested into pain perception. If we attempt to force pain perceptions to disappear, they appear, just as when we attempt to force sleep consciously we remain sleepless; if we attempt to force ourselves to be pleased we only become annoyed. The more force the superconscious will attempts to exercise the greater will be the defeat. It is much better to suggest the patient into channels of thought remote from pain, by the artful employment of apparently impromptu remarks upon subjects quite foreign to the operation, or to declare that the pain is disappearing. With suggestible individuals the mere reiteration that there is no pain aids anesthesia. It is also of importance that the surgeon show no anxiety or concern. Obviously the patient is surely thereby suggested into alarm or panic.

VALUE OF ENCOURAGEMENT AND MUSIC

One need hardly mention the suggestion value of complimenting the patient upon the display of courage and confidence, upon the triumph of their good judgment over the fears and misgivings of friends and relatives as to the possession of the requisite qualities of patience and fortitude. The surgeon does wisely to assume the big brother relation or the benign attitude of the father adjuring the little son to take his medicine "like a man." Reassurance under some circumstances may amount to deception, but this is justifiable and, moreover agreeable to the patient for, as Barnum maintained in his oft quoted practical philosophy, "*populus vult decipi*."

Recourse to music as an adjuvant to provide for the operating theatre the tranquil mood, and for the patient the gentle abstraction so desirable in surgical undertakings upon conscious individuals, was suggested by the expressed wish of patients that the soft seductions of music might be employed to take the thoughts of the patient from the operation, providing this could be accomplished without turning the operator's thoughts from the business-like, practical matters with which they of course must be engaged.

Realizing that this subject is obviously quite refractory to analysis, and with trepidation appreciating how readily such a discussion might drop to the plane of the absurd, but basing the state-

ment on personal experience, I believe I can say with the restraint of decent conservation, that music which caresses the ear and soothes the fretted nerves of the patient need not becloud the clear thinking, nor hinder the technical precision and thoroughness of the operator. Combarieu says that music is a special act of the intelligence intervening in the chaos of emotional life to bring it into order and beauty.

The patient is, insofar as cerebration is concerned, to some extent, carried away by the music drifting about in a shadowy world of sensations and memories. Pleasant stimuli neutralize painful stimuli. Other sensations than those of the operating room are provided, for, as Helmholtz says in the first pages of his book, "in music sensation is everything."

It can hardly be doubted that music influences the emotions, stimulating, depressing, soothing, irritating. It will be admitted that music induces reactions in the organism as for example, the shuddering of the periphery which is supposed to be a sign of the impression of the sublime. It is surely true that music induces psychic and physiologic reactions; that it affects the respiratory, circulatory and nervous systems. If a Schumann lied or a nocturn of Chopin or a soothing American folk song played, if you please, upon a Victrola in an adjoining room does in fact in selected cases induce mental repose and nerve and muscle relaxation on the patient's part, it is not absurd to make use of it, providing it does not cause the thoughts of the surgeon or his aids to aberrate. If the surgeon is not at all musical, the plan might fail and of course it is not in disparagement of the culture and intellectuality of surgeons to presume that many are not so musical as was Bilroth, the friend of Mozart who was as much at home with his violin as with the scalpel. Napoleon the first, said that music disturbed his nervous system and Grant hated music.

It is to be hoped that these remarks will not be interpreted as an attempt to encourage a therapeutic step based upon music. That of course would amount to sheer nonsense. History abounds with instances of attempts to cure disease with music, but these attempts were doubtless based upon the superstition that in the sick person dwelt an evil spirit which music put to flight. However, I think one is safely remote from such superstition in taking operation with regional anesthesia feels that appropriate music will divert the mind and relax the body, then the surgeon does a sensible, rather than a theatrical or absurd act in providing it.

Mesmer, the ridiculous lilac-robed heirophant and quack of Vienna, made use of these subtle influences. Richly stained glass windows shed a dim religious light upon him as he approached his patients and aeolin harps sighed the gentlest and most soothing strains from distant chambers. Mesmer dreamed that he could fool a multitude of

people for a time and get rich. And he made the dream good, but let it be said that although Mesmer was an out and out fraud, there was nevertheless a little truth in his confused theories and this truth can be used today for the good of humanity.

PERSONALITY OF THE SURGEON AND THE VALUE OF SUGGESTION

It can hardly be denied that the personality of the surgeon enters deeply into the consideration of this subject. He must rule the patient with the rod of confidence and sympathy. His mind must direct and control in the greatest measure possible the mind and body of the patient. There is no quackery, no necromancy about this. It is merely appreciation of what DeFleury calls "the pathology and hygiene of the intellect."

Even a bare reference to the influence of the mental factor may be distasteful to practical physicians and surgeons who insist that their art rests upon a very material basis but who, nevertheless, make frequent use of this factor vaguely and often unconsciously. We prize too much our freedom from philosophies and mysteries to look upon that which distracts us from our physical studies as anything better than knavish quackery.

"Philosophy in medicine is not the fashion now. The stern, practical and scientific character of the medical school training, the mechanical and chemical plane on which our physiologies move; the strictly material nature of modern pathology all tend to foster the belief that any consideration of the psychic in medicine is archaic in character and futile in results." (Schofield Force of Mind). Nevertheless, though one may not be able to measure or understand it fully, one comes daily to the belief that a fair valuation of the influence of mind over body and its relation to the psychology of the operating room is of especial importance in the employment of regional anesthesia. "Medical psychology belongs to our whole profession and surgeons cannot ignore it." (Chrichton Browne).

Tuke (Mind and Body, 2d Edition, Vol. 1, p. 15) says: "I want medical men who are in active practice to utilize this force, to yoke it to the chariot of the son of Apollo and rescuing it from eccentric orbits of quackery, force it to tread with measured steps the orderly paths of legitimate medicine."

In the Journal of Surgery, Gynecology, and Obstetrics of December, 1906, Alice Magaw, a recognized authority in anesthesia, says:

"Suggestion is a great aid in producing a comfortable narcosis. The anesthetist must be able to inspire confidence in the patient, and a great deal depends on the manner of approach. * * * * The secondary or subconscious self is particularly susceptible to suggestive influence; therefore, during the administration, the anesthetist should make those suggestions that will be most pleasing to this particular subject. Patients

should be prepared for each stage of the anesthesia with an explanation of just how the anesthesia is expected to affect him—"talk him to sleep," with the addition of as little ether as possible."

Munroe in his book says that:

"The significance of the employment of suggestion as an adjunct to the administration of anesthetics goes far beyond the danger to the patient directly and immediately during the course of the operation. The surgeon who does not have his patient's reserved energies weakened and exhausted, and the patient's brain and nerve centers presiding over all physiological processes so seriously and permanently injured, as is the case with the Mayos, on account of the employment of suggestion to obviate the necessity of such enormous quantities of the anesthetic, simply has more recuperative power left in the cells of the organism of his patient upon which the hope for a favorable outcome from a major operation is based, and surgical operations upon patients with the minimum amount of poison from the anesthetic to combat are unquestionably attended with better results than where larger quantities of the drug are used."

Perhaps we have been too much inclined to think of psychic influence upon the sick as belonging strictly to the practice of quackery. Schofield (*The Force of Mind*, p. 5) asks why in the name of Aesculapius should the medical profession have to look to a quack for boldness and force. Is there to be no dignity and authority, no courage and aggressiveness in a physician's personality? He asks whether virtue does not lie in the boldness of the quack, in the force of assertion, or in both. Though the influence of mind over body is everywhere seen and felt, it is neglected or ignored in operating rooms and at sick beds. Among the most successful physicians "Our best have owned the rare dramatic power, which gives to sympathy its lifting hour." (S. Wier Mitchell; *The Physician*).

Muensterberg remarks:

"The time is ripe for a systematic introduction of psychologic studies into every regular medical course. It is not a question of mental research in the psychology laboratory, where advanced work is carried on, but a solid foundation in empirical psychology can be demanded of every one. He ought to have as much psychology as he has physiology."

Lewellys F. Barker, tells us that:

"America, so far ahead in many subjects of medical instruction, is no less than fifty years behind Europe in this particular."

A personality, gentle but strong and sincere which takes the patient into its sympathetic embrace is almost, if not quite, as desirable in a surgeon as professional ability and manual skill. Temperament is no less important than learning. We realize how surely the gentle personality reaches and controls the lower animals. I have a friend, a doctor's wife, who can go into her

garden and pick up a robin or a wren. The human animal responds no less readily to the appeal of that nature in which gentleness combines with sympathy and sincerity.

Crile, perhaps more than any other has awakened in us, a respect for personality in surgeons. His whole scheme of anociation, it seems to me, is based on personality, a program of gentleness, beginning with the first inspection of the patient and continuing until the patient leaves the hospital. A radiant, magnetic personality and buoyant spirit in the physician can do much at the outset to overcome the despair of hopeless patients with mind made up to die and to carry them through the anxious, doubting period of convalescence.

Munroe (*Suggestive Therapeutics*) says:

"Especially is this quality in the physician necessary in the treatment of enlightened and self-respecting people. It begets a reciprocation of that respect which such people feel is due them. They positively refuse to be driven, but it is only an evidence of their high intelligence when they are willing to be led for their own good by the skillful direction of a strong, sympathetic, conscientious physician.

"A sensible display of tact and diplomacy will often enable a physician to win the confidence of a patient, and thus secure the co-operation so essentially necessary for the best results, when being too blunt and abrupt would render him utterly helpless.

"It is a great help to a physician to be able to lay hold of people and induce them to help themselves to get well. We all help or hinder the recovery of our patients, far more than many realize, by the way we deal with them. We unconsciously use suggestive therapeutics at every step in our routine work."

There is no doubt that the imparting of hope, the radiation of cheer, the employment of patience and forbearance on the surgeon's part impose a tax upon him. The surgeon who habitually uses local anesthesia must give much of himself to his patient. The method can appeal only to those who are willing to share some of their surplus nervous energy with their patients, and who are willing to emphasize all of the apparently slight factors of kindness, precision and gentleness, and to proceed with the caution of a serpent, and the patience of Job. It is in no way related to surgical showmanship.

SCOPE AND LIMITATIONS OF REGIONAL ANESTHESIA

I believe it does not imply a prejudiced viewpoint to say that whereas regional anesthesia is only one of many useful methods of suspending pain perception; it is, nevertheless, one of the most useful of these methods and, further, that its scope of usefulness is still not generally appreciated.

As a friend of local anesthesia, a discussion of its possibilities are, to me, more interesting than

a discourse upon its limitations. Limitations it has of course, but these are less restricted than one unfamiliar with its possibilities might believe. For example, an individual with sound heart, kidneys and lungs has a better chance under general anesthesia, if extensive abdominal surgery is to be done, than if the abdominal operation be carried out under regional anesthesia, for the reason that such work can be executed more quickly and more thoroughly, if the patient is asleep; that is, inhalation anesthesia permits a more expeditious and, oftentimes, more complete operation. But, of course, not infrequently the condition of the big organs mentioned presents a distinct contraindication to inhalation anesthesia, or even spinal anesthesia with its depression of blood pressure, and then local anesthesia comes forward as a boon, for practically every abdominal operation can be done, if need be, under local anesthesia.

In the case of goiter operations, if I may be pardoned for a dogmatic utterance, inhalation anesthesia is rarely useful. This, I believe will become the view of more and more surgeons as time passes. In this field local anesthesia has, to be sure, some disadvantages. A few times in my own experience, patients have become panic stricken toward the close of the operation and by moving about have interfered, somewhat, with the surgeon's manipulations rendering precise work very difficult of accomplishment. Under such circumstances the desirability of complete relaxation and unconsciousness is emphasized. This embarrassment, however, is of minor importance, as compared with the dangers of post-operative pneumonia, over-taxing of the heart, over-taxing of the kidneys, increased danger through failure to block the sensory nerve paths, resulting in the needless consumption of nervous energy as explained by Crile; injury of the recurrent laryngeal nerve, and asphyxia of any degree.

Ochsner admonishes that surgeons who are inclined to be violent in their manipulations should perform thyroidectomies under local anesthesia, with its enforced gentleness, since there is no doubt as to the likelihood of increased post-operative perversion of thyroid function, if the tissues are severely traumatized.

It has been mentioned by many men of great experience and recognized authority in goiter surgery that regional anesthesia should be employed in operations upon the very serious toxic cases only—such surgeons advocating ether or gas oxygen for the simple and mildly toxic goiters. It is not easy to understand their reasoning. If, as seems true, all are agreed that regional anesthesia is desirable when the safeguards which it provides are demanded, and if no one will contend that simple goiter cannot as a rule be operated upon conveniently and safely under regional anesthesia, then why is it not a fair deduction to say that one is justified in developing one's skill by accumulating experience in operations upon

mild cases in order to be prepared to employ the regional anesthesia, where it is demanded, with the mastery which only experience can give. With experience comes patience, enthusiasm, consistency, the unhesitating manner, invented tricks and original ideas. One learns to observe psychologically, correctly, and to individualize.

So far as the psychic ordeal is concerned, this, in my experience has been less depressing with regional anesthesia than with general anesthesia.

THE PSYCHIC REACTION TO GENERAL AND LOCAL ANESTHESIA

It has been said that patients come to the operating room for operations under regional anesthesia in great mental distress and with badly broken general morale. My experience may not be extensive enough to justify general deductions but, nevertheless, I venture to contradict this statement, for I believe the reverse to be true; that is, patients are reassured by the surgeon's promise to operate without pain and without sleep producing anesthesia. Let any surgeon ask himself the question whether he would not prefer, for the effect upon his morale, that his hernia, for example, be operated under local anesthesia.

It need hardly be stated here that the dread of inhalation anesthesia is the backbone of the truss makers business. Likewise, this same dread of general anesthesia will turn patients who otherwise would go unoperated, to the surgeons who make the most of the possibilities of the regional anesthesia method.

A very distinguished surgeon has recently said that he has not the time to perform prostatectomy under local anesthesia. This, I think should be taken literally. This man, one of the most brilliant of American surgeons, is perhaps too busy to use local anesthesia for prostatectomy, although the additional time required is very slight. However, in this case, should not these old patients with defective hearts, lungs and kidneys, be turned over to those of reasonable skill who have time enough to provide for the patient the important safeguard given by local anesthesia. I have found that it cheers these old men to tell them that their operation can be done under local anesthesia without pain. It strengthens their morale. Like children they are peculiarly susceptible to suggestion.

I believe that the teaching of this distinguished man in relation to this particular subject is bad. So brilliant is the virtuosity of this operator, so inspiring is his personality that his visitors are thrilled by him into a state of mind in which they are prepared to believe anything he says, and in which they would give little heed to the utterances of a plodding advocate of local anesthesia. Nevertheless, if the surgeon is willing to give something of himself to his patient; to make some sacrifices of his own stamina he can, with local anesthesia safely operate upon a consider-

able proportion of prostatic hypertrophies which, under inhalation anesthesia could not safely be operated upon.

Allen in his book recalls the words of Hypocrates "divinum est opus sedare dolorem"—"It is a divine work to subdue pain." We have support

of this in the record of the first anesthesia in which the Lord caused a deep sleep to fall upon Adam while a rib was excised. To this one might add that with the regional method it is now quite human to subdue pain in surgery and with complete safety.

Obstetrics and Gynecology from the Standpoint of the General Practitioner*

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Editor's Note.—While the tendency toward specialism and group medicine is trying to meet certain necessities in the practice of medicine, at the same time there is a very decided reaction in favor of the all-around efficient general practitioner coming back into his own. In relation to obstetrics and gynecology, Dr. Peterson, cannot but see that aside from calling counsel in obscure conditions and difficult operative procedures, the general practitioner can well handle the routine cases met with in obstetrical and gynecological work. In fact the practitioner is in a better position to render proper service than the specialist and if he will only live up to his full responsibilities and opportunities, there is no reason why the general practitioner shall not prevent or cure many of the conditions that now are the mainstay of the specialists' practice. The general practitioner is in a position in which he can bring his common sense into play. Carried away by no fads or foolishness, he can study the entire mechanism of his patients and get an accurate idea of the ailments with which their organisms are afflicted. Perhaps, best of all he can come into human touch with his patient, he can offer them that aid, not medicinal but spiritual, which is priceless to those who receive it.

ALLOW ME to express my appreciation of the honor conferred upon me in the invitation to address you upon this occasion. Also, that there may be no misunderstanding, it may be stated at the outset, that what I am about to say will be the farthest removed from an oration. It is indeed difficult enough for us poor medicos to express ourselves intelligently. To ask us to be orators is the height of folly. However, I have been assured that the word oration means only that I am to address you upon some general topic connected with medicine and that the flourishes may be omitted.

In selecting the subject of obstetrics and gynecology from the standpoint of the general practitioner, I run no risk of not interesting you so far as the topic is concerned. For in a general way what applies to one specialty applies to them all. Also, since a large portion of the medical world is made up of either specialists or general practitioners we are naturally interested in what concerns us directly.

DRIFTS IN THE PRACTICE OF MEDICINE

Whither are we drifting, medically speaking? Is the general practitioner to become extinct and are we all to become specialists? Will the pendulum again swing the other way and for economic or other reasons will specialists decrease proportionally and the ratio of general practitioners increase? Certainly interesting queries and the answers vital so far as the interests of the public and the profession are concerned.

The thoughtful student of things medical can

see a great change in the practice of medicine during the past third of a century. Specialists there were thirty years ago, but only a few in comparison with those who profess to be specialists today. Why this trend toward specialism? Why are general practitioners so scarce in the rural districts, and why are specialists so numerous in our cities? These questions can not be answered off-hand by saying that the pecuniary returns from a specialty are greater than can be expected from general practice, or that the work of the general practitioner is hard and exhausting. No doubt these are factors in deciding men either to specialize directly after the completion of their hospital internships or to take up specialties after some years of general practice. *However, a far greater reason, I believe, is the desire on the part of the physician to master one subject thoroughly; this desire induced by a feeling of helplessness, bewilderment and despair in the presence of the immense development of the various fields of medicine. In spite of the bold front they may put on with their patients, because the inspiring of confidence in their skill is one of the most important factors in the art of medicine, physicians as a class are naturally modest as regards their attainments. They feel they know very little in comparison with what is to be learned and that the field of medicine and surgery is vast and becoming greater each decade. Hence they reason that if their work be confined to a certain limited field more can be accomplished than if their efforts were wider spread.*

THE REQUIREMENTS FOR SPECIALIZATION AND GENERAL PRACTICE

This desire to be master of one field of knowl-

*The Address in Obstetrics presented before the General Session of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4, 1921.

edge is commendable surely. However, one should not start upon such a career without a full realization of what specializing in medicine calls for. At the present time there are in all fields too many pseudo-specialists, men without preliminary ground work or training. Such men may have a large clientele for, as we all know, the size of a man's practice depends only in part upon his knowledge and skill, but they are far from being masters in their respective fields and insofar as they fail from lack of any quality which goes to make up the true specialist, they tend to lower the standing of the profession.

Medical students are more or less mirrors of what is going on in the medical profession. Hence it is interesting to talk with the students of their plans for the future. Even as early as the junior year they have selected their specialties or rather their specialty for the large majority are going to be surgeons. To be sure this planning may be a part of their immaturity just as all of us chose our careers when we were children, farmers, butchers, policemen, the children of a later day adding motormen and chauffeurs. Still, after all, this early choosing of specialties by medical students who have not even learned the ground work of medicine is rather significant. Ask them why they do not consider general practice, for a few years at least until they know just what they are fitted for or want to specialize in, the replies are quite frank and after all merely the echo of what is actually transpiring in the medical world.

General practice does not interest these planners of the future because the general practitioner leads a dog's life, especially the country practitioner. They point out the very true fact that he never has a half hour he can really call his own; in other words, he is at everyone's beck and call. Such a life does not appeal to them, they say; they prefer regular hours for work and a certain number of them and plenty of time for recreation.

Another and very frequent reply to the question as to why one should not fit one's self for general practice is that there is not nearly as great a chance to make money in a general as in a special field of work. I think I see, I may be wrong, a change in the student's attitude of mind about these things from what it was say twenty-five years ago. He talks quite frankly now of what he is going to get out of this game, this practice of medicine he is about to engage in. He weighs very carefully evidence for or against a certain course of action. As I study the mind of the medical student of today he seems much more alive to certain things making for success than was the student of say thirty-five years ago. He is more efficient, is more alert, and spends much more time looking after his own interests. After a conversation with one of these young men, you can not conceive of his becoming what was only too common a type of practitioner years ago. You know to whom I refer, the doctor with the

stuffed birds and instrument case in his reception room, a desk in his consultation room which had not been cleared since he began to practice and was the handy repository of bills—mostly unreceipted—sample bottles of medicine, scraps of letters, advertisements from patent medicine houses, et cetera.

This attitude of mind on the part of those who are eventually to take our places is not without its commendable features. Perhaps one of the greatest faults with our profession has been unbusiness-like methods, a hold-over possibly from the time when it was considered bad form for the doctor to soil his hands with money. Yet I sometimes wonder if the opposite trait of character has not been carried too far, whether there are not some grounds for the common criticism of certain members of our profession that they are more interested in fees than in curing their patients. Certainly as a profession we can justly resent such criticism for it applies to only a small minority.

It must not be lost sight of that this country has changed greatly during the past quarter of a century. People, physicians as well as others are not contented at the present time with what was considered adequate and just twenty or thirty years ago. As a nation we have grown enormously rich and riches carry in their wake a certain weakening of moral and physical fibre. Just at present it is the fashion to lay everything to the effect of the war, but this merely checked for a time and then augmented the change in the impulses, desires and ideals of the medical profession.

It was inspiring to see the medical profession respond to the call of duty. It was a privilege to be a witness, as was I, to the sacrifices physicians were ready to make for their country. It demonstrated beyond a doubt that the qualities of sacrifice, self-forgetfulness, and service were present in times of national need. Then at demobilization came the reaction. Thousands of rural general practitioners did not return to their home towns but sought the opportunity to begin special practice or settle in the large centers. This has resulted in much actual suffering in many parts of the country from a lack of practitioners as shown by petitions received by the authorities of medical schools to send recent graduates to such localities. I fear that many physicians who took up specialties or who changed their locations will be sadly disillusioned in the course of time. In fact, many such instances have come to my notice.

GROUPS AND CLINICS

Just at present we hear group medicine, so-called, greatly extolled. Inspired by the unexampled success of one institution in the country "groups" or "clinics" are springing up all over the land. While the advantages of such combinations are obvious for disarrangement of separate

portions of the body can be studied by specialists and the final diagnosis attempted after the returns are all in, there are certain disadvantages connected with all group medicine schemes. The patient loses his sense of personal contact with his physician. He may be impressed and even awed by being shunted around from one specialist to another but he is just as apt to become disgusted unless there be a good clearing house system, where the final diagnosis is explained to him by one person and in a good common sense manner.

I remember a story told me once by a practitioner of the old school, a kindly old gentleman, who bore patiently with me when I insisted upon such and such methods, yet who arrived at the correct diagnosis by ways I could not understand. With a twinkle in his eye he told of sending for a learned German veterinarian when his horse was ill. An hour was spent in a most careful and systematic examination of the ailing animal and another hour on a general disquisition upon the ailment of the horse. Finally the doctor grew impatient and said, not discourteously but firmly: "Yes, but what is the matter with my horse?" and the veterinarian replied with great solemnity, "Ah, dot is de question."

Group medicine or the various examinations by specialists not associated in a group is very liable to confuse the patient. Especially is this true, if after submitting to exhaustive examinations by different men of varying personalities, he is finally told that it is impossible for a definite diagnosis to be made. It is easy enough to hear the mutterings and complaints of patients now-a-days, if we will only pause long enough in our work to listen. If we refuse to do this it may be borne home to us if we ourselves or one of our families fall ill with an obscure complaint. To be sure it is just retribution to be sent from the internist to the surgeon, from the latter to the ophthalmologist, then to the otologist, from his office to that of the neurologist who refers to the orthopedist or proctologist while in the meantime the excretions, secretions and more "etions" are being examined in the chemical laboratory, all these examinations in addition to the roentgenologist who will put you through a course of sprouts for two or three days, blowing you up, filling you up and finally taking pictures of your insides, which, to the patient, look as if they ought to make the futurist painter turn green with envy and finally after the evidence is all in you ask, "Well what is the diagnosis?"; the answer comes back, "Ah dot is de question."

THE ROLE OF THE GENERAL PRACTITIONER

In addition, suppose this reply is made after the patient has paid specialists' fees for all this work. Is it any wonder the public is becoming restless and longs for the return of the good old days when they were looked over carefully by their family doctor and helped. Gladly would

they turn now to the general practitioner for diagnosis and treatment if he in turn would do his part. But he is either poorly qualified and has not learned how to make the simplest examinations or else he is over conscientious or over awed by the knowledge he thinks the specialist possesses and refers all his cases.

It must not be supposed I am decrying specialism as such. That would ill become one who has been a specialist for many years. There will always be a field for the specialist when it comes to the diagnosis and treatment of obscure and difficult cases. But what should be realized and acted upon is that there is nothing mysterious about the main part of a specialist's work. The underlying principles of diagnosis and treatment of any specialty can be learned through observation and study by any intelligent general practitioner. It is within the province and moreover the duty of the specialist to advance his specialty by trying out new methods of diagnosis and treatment. A great many of these methods will be used for a while and discarded. The practitioner can well afford to wait until time has placed its approval upon a new method. Then if it be valuable he can acquire its principles and add it to his diagnostic armamentarium.

OBSTETRICS AND GYNECOLOGY IN RELATION TO THE GENERAL PRACTITIONER

Let us look at one specialty, obstetrics and gynecology, in relation to the general practitioner to illustrate what has been said. I refer to this one specialty for in reality it is or should be one, for it is impossible to understand and practice obstetrics, the functioning of a certain definite part of the female birth canal without a knowledge of the disturbances to which this canal may be subject—gynecology—and the reverse is even more true. Now, what is there about obstetrics the intelligent, well-grounded, observant practitioner can not acquire? Certainly it is within his power to gain a satisfactory idea of the size of the bony pelvis by pelvimetry for there is nothing difficult or mysterious about the use of the pelvimeter. He is or should be constantly training his fingers and hands so that he ought to be able to gain a fair idea of the size and position of the fetus. Since he is accustomed to the use of the stethoscope he ought to be able to hear and keep track of the fetal heart. Better than anyone else he knows the life history of this patient, knows of hereditary tendencies or is aware of congenital defects. In fact no one is in a better position than the general practitioner to counsel and safely guide his patient through her pregnancy. By frequent examinations during this period he can assure himself that no toxemia is present or threatening. An elaborate metabolism apparatus and extensive laboratory outfit are not necessary for this work.

And the same may be said for all pre-natal work. The simplest methods will suffice. Only

the practitioner must have outlined a plan and systematized his work, so that the pregnant patient will be cared for and not neglected and the same thing may be said of the labor itself and the puerperium. His patient must be taught that while labor is a natural process, in a certain proportion of cases it is abnormal and that each case is potentially abnormal until it has been proved otherwise.

Just as any operation can be performed safely in any home, if sufficient time be given for preparation, labor can take place in any home with perfect safety, provided a plan of campaign has been thought out carefully in advance and certain things guarded against; and the cost of such preparations will be slight. Soap, boiled water and clean linen are not beyond the purse of the large majority of women who bring babies into the world.

In operative obstetrics the practitioner must insist upon the necessity of having competent professional counsel and help. Somehow I mistrust the practitioner who is continually boasting of what he has done in obstetrics alone or assisted by incompetent women. Usually it shows poor planning and should be apologized for and not boasted of, since it is not emergency operating but an event which was known to be coming off for six months or more.

The woman should have the same careful attention during the puerperium. Nurses can be trained in any community to do careful aseptic work and thus save the physician's time during the puerperium, but this arrangement can only be carried through by considerable careful planning. It is no safer to trust to luck during the puerperium than during pregnancy and labor.

If the practitioner has done his obstetrical work faithfully, gynecology in his practice will be reduced to a minimum. Excluding neoplasms and venereal infections, the large part of a gynecologist's work comes from poor obstetrics. The practitioner is in a position to be an ideal gynecologist, speaking broadly, and not merely from the operative standpoint. Who occupies a better position to treat skillfully functional menstrual derangements? Since he is intimately acquainted with the lives of his patients, secret and open, he is able to decide whether tender ovaries, with the accompanying dysmenorrhea be due to disease, to sexual excess, mental overwork or to general disturbances.

The general practitioner's fingers can be trained for accurate gynecological as well as obstetrical diagnosis. By following out a few simple rules he will be able to detect early carcinoma of the uterus, for patients go to their family physicians long before they consult the specialist.

It is within the province of the practitioner to reduce greatly the curse of venereal disease. He has many opportunities of instructing boys and young men regarding the true nature of venereal disease in relation to their future wives. He will

be in a position to correct the erroneous impressions the young have had instilled into them of the harmlessness of the ordinary gonorrheal infection.

In effect, the general practitioner has it in his power to be par excellence the true physician since he will be in a position to prevent and not simply cure disease. This according to Sir James McKenzie is the highest form of medical art, of far more value than is the art of the surgeon who must do the best he can with conditions as he finds them, with oftentimes disappointing results.

Above all, the general practitioner is in a position where he can bring his common sense into play. Carried away by no fads or foolishness, he can study the entire mechanism of his patient and get a most accurate idea of the ailment or ailments with which the organism is afflicted. Perhaps, best of all he can come into human touch with his patient, he can offer him that aid, not medicinal but spiritual which is priceless to him who receives.

FUTILITY OF STATE MEDICINE

I am not alarmed over the coming of State Medicine. If some misguided legislature does try the experiment, the recipients will in time repudiate it because it is bound to be machine-made and savor of all such goods. If some autocratic power should attempt to force such medical treatment upon the so-called laboring classes, instinctively they would protest and rebel and they would be right in so doing. Yet since it is something they are seeking, something to be obtained for nothing, or next to nothing, they are eager for it. If it comes it will be a soulless medicine and for that reason will fail.

Neither am I very enthusiastic over state provided community hospitals. Not that such hospitals in districts or counties are not desirable institutions but I doubt whether schemes for multiplying such hospitals in communities where the medical profession on their own initiative has not brought them into existence will be successful. As I see small hospitals springing up all over the State in which I reside, it seems to me as if the medical profession and the communities are solving such problems about as well and as fast as is good for them. Growth medically as in other professions and walks of life must come from within and not from without. If general practice has become distasteful to many men, the fault lies with the practitioner who has it in his own hands to change conditions. This can not be done by apologizing for one's work and saying that the plan is to give up this or that part of his practice and become a specialist. The remedy lies in harder work in ways which will accomplish more and render life more satisfying. I know of no more miserable existence than that of a pill vender. On the other hand there is no occupation more replete with interest and satisfaction than is that of the general practitioner. But one must be alive not half dead to make a success of this as with

any other occupation. Alert, wide awake, studious and tactful general practitioners could put half the specialists in the land out of business in the next decade, if there were enough of them; that is, unless the specialists should wake up and change their present tactics.

CONCLUSION

However, that is not the point I am striving to make, which is this:

The general practitioners have been fooling

themselves when they have the game in their own hands. This country is not looking for specialists, they are to be found on every corner. What the country wants is more family doctors, general practitioners, call them what you please. It wants them because instinctively the people are crying out for the human side of medicine. Will the medical profession answer this call? If it will I for one am firmly convinced that the people of this great and prosperous country and the medical profession will be better off.

Diseases of the Pancreas*

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Editor's Note.—In his address Dr. Haines draws a comparative clinical picture of the varied types of acute and chronic pancreatitis and also details the diagnostic points regarding cysts and malignant growths of the pancreas. In view of the fact that diseases of the pancreas are so readily confused with those of the gall-bladder it is important for both the general practitioner and the surgeon to be able to differentiate them. Dr. Haines stresses one very important consideration and that is that the upper right quadrant of the abdomen is one of the privileged regions of the body, second only to the neck in the exhibition of shock following trauma. Hence the necessity for expert operating in any surgical interference in pancreatic pathology. Excellent and matured advice is given with regard to operative technique for the various conditions of the pancreas taxing the resources of the progressive surgeon.

INTERDEPENDENCE of the upper abdominal digestive group has long been a theme of intense interest to the writer.

Opportunity to study stomach, liver and gall bladder lesions presents so frequently in the operating theatre and in current literature on these organs, that one may become comparatively proficient in the management of disease of these organs. But the third member of the group, the pancreas, has hitherto proved more or less elusive and has often set at naught the painstaking efforts of the clinician to interpret and relieve symptoms attributable to its pathological processes.

All surgeons, who have had considerable operative experience in this region of the body, are familiar with the low grades of pancreatitis so frequently associated with chronic disease of the gallbladder.

CHRONIC PANCREATITIS

In chronic pancreatitis, one learns early to look to the dejecta for confirmatory evidence of the clinical diagnosis. The stool contains numerous undigested muscle fibres of nuclei and a putrescent fatty substance which emits an abundance of sulphuretted hydrogen gas.

Numerous small gas bubbles stud the surface, suggestive of active fermentation in the pale, odorous, trembling mass. Pain or discomfort, nausea, flatulence and eructation, of a peculiarly offensive character, coming on soon after eating in

a patient, who expresses a distaste for fats and sweets and a craving for acids, should direct one's attention to the pancreas as a probable source of the symptoms.

Rapid loss of weight, hyperglycemia, glycosuria and lack of ability to make a continued mental effort, added to the above constitute a clinical picture easy of interpretation. Administration of a brisk saline cathartic at this time will bring away large, light colored, offensive stools and symptomatic relief will follow.

Jaundice usually precedes the demonstrable lesion or is present in the course of the disease. A peculiar slate-colored hue of the skin is not infrequently present in chronic pancreatitis.

The past history of these patients will contain reference to one or more gallbladder attacks and if, in the surgical treatment of these patients, one will make a practice of gently palpating the head of the gland after examining the common duct, he will invariably find an increase in the size and density of the gland substance. In this type of pancreatitis, very satisfactory results follow prolonged drainage via cholecystotomy or cholecystenterostomy.

Many of these patients are mistakenly operated upon for gallbladder disease and the modern practice of cholecystectomy destroys the most useful ally in the surgical treatment of chronic pancreatitis.

If permanent drainage is desirable, an anastomosis between the gallbladder and duodenum, jejunum, stomach or large bowel, preference being given in the order named, will best serve the purpose.

*Chairman's Address of the Surgical Section of the Ohio State Medical Association, presented during the Diamond Jubilee Meeting, at Columbus, May 4, 1921.

Many years ago, the writer called attention to the stormy post-operative recovery which occasionally follows operations in the upper right quadrant and pointed out that it was due to trauma of the pancreas at operation. This is one of the privileged regions of the body second only to the neck in the exhibition of shock following trauma.

In dealing surgically with disease of the pancreas one should keep in mind the mechanical means for draining the secretions. In nearly 70 per cent. of human beings the common duct runs through the head of the pancreas and is partly or wholly surrounded by gland substance.

This arrangement lends itself readily to obstruction of the duct by compression following edema or tumor formation in the head of the pancreas. There is an accessory duct with a separate opening into the duodenum in 50 per cent. of patients, which will afford some degree of relief when the duct of Wirsung is blocked.

Cicatricial contraction of fibrous bands resulting from a chronic pancreatitis, may cause transverse depressions in the surface of the gland and interfere with free drainage. A calculus, impacted in the terminal common duct, is by far the most common cause of obstruction, as pointed out by Opie, who also demonstrated that infected bile was forced into the pancreatic duct in such instances giving rise to infection in the ducts and glandular substance.

Infection may also be conveyed to the pancreas through the lymph or blood stream in the absence of duct constriction. The course, duration, severity and final outcome of the disease will largely depend upon the character of the infective agent, staphylococci, seemingly being the most rapidly fatal to the patient.

ACUTE PANCREATITIS

Acute pancreatitis is ushered in by severe pain in the upper abdomen accompanied by nausea, vomiting and collapse.

The patient is desperately ill and nearly all patients suffering of the disease are admitted as stretcher cases. Succeeding hours are marked by increase in the intensity of the pain, persistence of vomiting of large quantities of rope-like mucous stained with bile, and in the later stages, tinged with blood.

The musculature of the upper abdominal wall is board-like and the skin covering the region is hyper-sensitive. Constipation is almost always present in the acute cases and this in the presence of pain, vomiting and distention, causes one to suspect intestinal obstruction; indeed, this is a most fruitful source of error in the diagnosis of the fulminating cases.

If the patient survives the attack for a week or ten days diarrhea will take the place of constipation and a diffuse swelling may be palpated in the region of the stomach, above or below the organ. Dilatation of the stomach and colon, which

accompanies the localized peritonitis always present, may obscure the tumor until it is well advanced in size.

Severe muscular efforts at vomiting intensify the pain which is rapidly wrecking the patient's life.

The severity of the pain and shock are said to be due to the close relation of the pancreas with the solar plexus, whence it derives its nerve supply.

Slight jaundice, present at the beginning of the attack, gradually deepens as the disease advances, sometimes taking on a bronze or slate-colored hue. In some instances the pinched anxious expression, indicative of a spreading peritonitis, is present on the first day of the illness.

The rapid, small pulse associated with acute pancreatitis is infinitely better as a clinical guide than the temperature curve which may vary from 96° to 104° F.

In the very acute cases, wherein large areas of the gland are involved, the temperature is subnormal; but if the patient survives the primary shock, the temperature becomes irregular, the pulse rate increases but the volume diminishes to the vanishing point, delirium supervenes and death from toxemia follows in from 48 hours to 5 days.

The large tumors, sometimes encountered in acute pancreatitis, are principally made up of extravasated serum and blood.

CLASSIFICATION

Classification of hemorrhagic, gangrenous and suppurative pancreatitis has but an academic interest. Clinically they are as so many phases of infection and the morbid appearance of the organ will correspond to the stage at which operation is instituted for relief.

Early recognition and prompt drainage will save some of these patients but the mortality with or without operation is very high. In acute abdominal conditions, simulating gallbladder involvement or high intestinal obstruction, one should keep acute pancreatitis in mind during the physical examination. On opening the abdomen, after perforation of the capsule has taken place, one encounters a peculiar, odorless, light-colored fluid in the peritoneal sac. The presence of yellow plaques of fat necrosis, distributed over the surface of the mesentery, is pathognomonic and clinches the diagnosis.

Marked cyanosis of the intestinal wall and a change in the physical appearance of the omentum, which is dry and granular in appearance, have been pretty constantly observed in the perforative cases.

Necrotic masses and large quantities of pus have been successfully removed from patients who survived the acute stage, after the process had cooled and the patient's powers of resistance were in the ascendancy.

Provision against destruction of surrounding

structures by pancreatic enzymes is a difficult problem in the post-operative management of these patients.

The method of fixing a drainage tube in the sac wall after the fashion of placing a tube in the gall-bladder and protecting the surrounding skin by covering it with castor oil serves a very good purpose.

CYST OF THE PANCREAS

Clinicians are more familiar with cyst formation than with any other pathological condition affecting the pancreas, probably for the reason that greater opportunity presents and more time may be spent in studying these slowly growing tumors.

Trauma is said to be a causative factor in the production of pancreatic cysts but accumulations of blood and inflammatory detritus in the lesser peritoneal sac will account for most of the so-called cysts following trauma.

Rupture of the pancreas may complicate the case and the cyst content show the chemical test of converting starch into sugar and still this would not prove the case to be a true cyst of the pancreas.

It is highly probable that retention of secretions, by incomplete obstruction of the duct with over-activity on the part of the secretory apparatus, induced by the stimulation of a mild grade of inflammatory change, will account for the greater number of the slowly growing tumors in the hypogastrium, which prove to be true cysts of the pancreas.

Artificial blocking, by ligation of the duct, is sometimes followed by atrophy of the organ but this, in no way, negatives the theory of Opie as to the production of ranula of the pancreas as the essential element, infection, is absent. These cysts grow slowly, consequently pain is rarely a prominent symptom.

They usually present above but occasionally below the stomach and may be palpated as smooth, non-sensitive, slightly movable masses. They may attain an enormous size, cases being reported wherein 2 gallons of fluid have been evacuated from one cyst. Attachment to surrounding structures by the thick walls of the sac renders removal of the cyst difficult or impossible.

Obstructive jaundice will be a prominent symptom in those patients whose common duct passes through the head of the pancreas; and conversely jaundice may be absent if the duct joins with the common duct and enters the duodenum without passing through the head of the gland.

Laboratory findings will depend, in a great measure, upon the location and amount of gland tissue involved. The islands of Langerhans are the most resistant of all pancreatic cells both to infection and cancer.

If only the cells of the acini and ducts are in-

volved hyperglycemia and glycosuria will be absent and the carbohydrate metabolism be slightly or not affected. Marked acites, from pressure on the hepatic vein, is present in some patients.

Cyst of the kidney or omentum must be kept in mind in the differential diagnosis. Tumors of the pylorus, stomach and liver should be readily eliminated in the physical examination.

For obvious reasons the aspirating needle has no place in the scheme of diagnosis. In studying diseases of the pancreas, one should ever keep in mind a picture of the histological structures of the gland. There are three separate and distinct types of cells, those lining the ducts, those lining the acini and those comprising the islands.

CANCER OF THE PANCREAS

Malignant disease of the pancreas is very insidious in the early stages and difficult of recognition. The head of the organ is the most frequent site of cancer and jaundice is one of the first signs to present. Pain is not very constant in the earlier stages but becomes severe and paroxysmal in character when distention, from obstruction of the ducts, takes place.

In the absence of palpable tumors, the most dependable sign is a peculiar type of discoloration of the skin. It is not the typical jaundice associated with common duct obstruction. There is a peculiar bluish cast admixed with jaundice, comparable to the hue of the skin of one suffering from a mild attack of Caisson disease plus a slight jaundice.

Hillier and Goodale, after investigating the subject, conclude that the ducts and acini are more prone to malignancy than are the islands. They record instances wherein the islands were wholly surrounded by cancerous infiltration without producing any appreciable effect upon the carbohydrate metabolism.

In a very unusual case reported by Hale White, the head and tail of the gland were simultaneously affected but the intervening tissue of the body showed no malignant deposits.

One of the chief difficulties in the recognition of these growths lies in the size and location of the tumor. Symptomatically, they closely resemble common duct obstruction except that the excruciating pain is absent. In the later stages the tumor may attain the size of one's fist and become firmly attached to surrounding structures. Intolerable itching of the skin robs the patient of his sleep and renders him very miserable while the slow feeble pulse and extreme depression presage the inevitable doom of the patient.

Extensive involvement of the islands will be followed by glycosuria, numerous, large fatty stools, loss of appetite, rapid emaciation and death from toxemia.

While there is a constant tendency on the part of the neoplasm to become adherent to neighboring organs, still the latter are rarely implicated in the malignant process. The lymph distribu-

tion favors secondary deposits in the liver and lungs but death usually takes place before the disease passes beyond the limits of the pancreas.

OPERATIVE TECHNIQUE

Growths in the pancreas have been successfully removed together with a large part of the gland. Coffy has devised a very ingenious method of providing drainage for the stump after resection by implanting it in an improvised pocket connected with the lumen of the intestine.

Five good sized arteries enter the gland, this and the intimate relation of important anatomical structures render free exposure of the field of prime importance when one is operating.

In a limited personal experience a long midline incision with division of the gastrocolic omentum has given a satisfactory exposure of the pan-

creas. If the stomach is prolapsed, one must either raise the organ to its usual position or expose the pancreas by dividing the gastro-hepatic omentum.

The former route is preferable when expedient as it gives a far better exposure of the field. The greater peritoneal cavity should be protected during the operation but if soiling has already taken place ample provision for pelvic drainage must be made.

Multiple incisions of the gland employed for the relief of acute pancreatitis will be followed by considerable hemorrhage which may be controlled by gauze packing.

Hertzler in his excellent works on tumors says removal of tumor of the pancreas is technically possible but that it has met with little success.

1606 FREEMAN AVE.

Psychoses Accompanying Extraction of Teeth*

Carl W. Sawyer, M.D., Marion

Editor's Note.—Sufficient attention, in the estimation of Dr. Sawyer, is not being paid to the reactions following the extraction of diseased teeth. Such extractions should be undertaken with the same caution and precaution with which surgical procedures are undertaken and if many teeth are to be drawn the patient should be examined and studied as for any other hazardous major operation. Patients already laboring under toxic states, especially metabolic toxic conditions, should have teeth drawn with even greater caution. Patients with constitutional defective states, merging into psychoses, should have the teeth drawn not only with due caution but usually by the step by step method. Senile and pre-senile individuals, who are already having a great deal of difficulty in securing a proper amount of food to nourish their brains, should have the teeth drawn only when satisfactory arrangements have been instituted to maintain their nutrition. All psychotic and neurotic individuals should be considered thoroughly from the point of aggravation of their trouble before teeth are ordered extracted.

DURING the last few years there has been considerable talk and activity relative to focal infection as the cause of disease. Especially has there been a very widespread idea that that particular type of focal infection associated with the teeth and known as *abscessed teeth* was the prolific cause of much of the illness which we are constantly treating.

EVALUATING THE NECESSITY AND RESULT OF EXTRACTIONS OF ABSCESED TEETH

Lately it has become almost generally accepted that these foci of infection about the teeth are one of the great provocative causes of mental diseases. As a result of this we have seen, recently, a large number of patients, who have had from one to all of their teeth drawn with the hope that the withdrawal would relieve them of their mental difficulty. We shall not go into the details relative to these cases individually, nor shall we discuss those that are benefitted by the withdrawal of the teeth for undoubtedly many are helped, but rather will take up those cases, in which the existing condition has been aggravated by this line of procedure.

The advice to remove the teeth has become so

common in nervous and mental diseases that we feel that it is time that doctors and dentists should weigh carefully the evidence presented in this class of cases and begin to draw some conclusions as to just what the results obtained really are and also when the teeth should be or should not be extracted.

We are convinced that the promiscuous extraction of the teeth is a potent procedure capable of a considerable amount of harm as well as a considerable amount of good.

GROUPING OF COMPLICATING PSYCHOSES

A careful analysis of the cases harmed by extractions of teeth leads us to believe that, generally speaking, they can be classified into several groups. For the sake of convenience we may arrange some of these groups as follows:

First, those cases in which the extraction of the teeth produces a toxic state with acute delirium.

Second, those patients of constitutional inferiority, in other words, those individuals who have never been totally normal, and who are of a psychotic type, and in whom the extraction of the teeth precipitates a serious condition, aggravating a state already existing.

Third, the senile and pre-senile group of pa-

*Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4, 1921.

tients, in which individuals, having obtained a rather advanced age, have the teeth extracted and then develop a dementia of the senile type.

There are other groups but these three stand out prominently and seem to indicate fully the necessity for calling attention to the fact that we must use considerable judgment in extracting the teeth in certain classes of cases.

ILLUSTRATIVE CASES

To illustrate the point more fully I wish to present a case describing each one of the mentioned types. These cases are characteristic of the types in general and while there may be a small variance in the cases, the general features will fit all of those belonging in their particular group.

ACUTE TOXIC DELIRIUM

The first patient illustrates the group in which acute delirium is produced by intoxication. The history is as follows. Female, 45 years of age, with good family history. During her early life her health was exceptionally good, but later at the age of 38 years, she had a complete hysterectomy, presumably because of diseased organs.

Following the hysterectomy she began to change mentally. Her people noticed that she was more nervous and at times seemed to be considerably confused, but the attacks of confusion were not of a serious nature.

About two weeks previous to her coming to us it was noticed that she was spitting some pus and blood. Her teeth were examined, found to be septic, and three of them were extracted. Immediately following this she became more nervous and her condition rapidly progressed until at the time of admittance she was found to be very delirious, confused, with great periods of excitement and furor followed by marked attacks of exhaustion. Within the last few hours preceding her admittance she developed decided suicidal tendencies and periods when she became very antagonistic toward those about her.

Physical examination showed a sallow complexion, dilated pupils, nose congested and bleeding slightly, teeth covered with sordes, gums badly infected and still exuding pus from the cavities. Palate inflamed, tongue parched and dry, breath exceptionally foul, glands below the jaw palpable, breath sounds loud and rasping in all parts of the lungs. Heart rapid with marked slurring of the first sound, heard best at the apex and a considerable amount of irregularity in the action. The liver was increased in size, considerable tenderness in the gall bladder area, large accumulation of feces in the large intestine, absence of pelvic organs, considerable swelling of the hands. Pupillary reflex sluggish, patellar increased. Marked urinary odor coming from her skin and a general toxic state.

Her perception was poor and she was evidently hearing voices. Consciousness was partially

present at times, but as a general rule she lay in a muttering delirium. Thought was greatly confused, the patient scarcely recognizing her people and having but little idea of her surroundings. She pulled and tugged at people about her and at times struck at them rather viciously.

The blood Wassermann test was negative, the gonorrhoeal complement fixation test two plus positive and the tubercular complement fixation test negative.

She ran a temperature varying between 99.2° and 100.4° axillary. Her blood count showed 4,912,000 red cells, leucocytes 9,400, and a haemoglobin index of 60 per cent. Systolic blood pressure was 198, diastolic 110 and the pulse pressure 88. Nineteen days later we found her red cell count had gone to 5,792,000, leucocytes 14,800, haemoglobin index 70 per cent., systolic blood pressure 142 and diastolic 90.

Her urine showed albumin, indican, large quantities of diacetic acid, and an occasional hyaline cast was present. Her weight was around 140 pounds, but she evidently had been losing recently.

Owing to the acidosis, the pustular infection and the acute delirium, her people were warned that death would more than likely be the outcome; in fact we have rarely seen cases of this type make a good recovery.

For a few days she seemed to be some better, then she gradually became worse, had a few more days of partial mental clearing and then very suddenly took a turn for the worse and passed away in less than two hours, never having totally regained consciousness or being free from the delirium.

While this case was more than likely a psychotic one before the extraction of the teeth, we feel quite sure that the shock, the releasing of the pustular condition in her body and the hemorrhage that followed the extraction of the teeth, aggravated her trouble and hastened her illness to a fatal termination. With many patients the withdrawal of several diseased teeth is of equal importance to any other operation performed upon these same people and we feel that it is advisable, in all instances, to look upon these patients as hazardous operative risks and that they should be investigated and handled in the same cautious way that other dangerous operative risks are examined, diagnosed, and operated upon.

Aggravated Psychosis.—Our second case was a constitutionally defective type of individual, who was in a moderate state of excitement preceding the extraction of the teeth and who following operation became so greatly disturbed that it was necessary to keep him in constant confinement. He was a male, 30 years of age, farmer. The family history was poor, there having been three cases of apoplexy and one case of paralysis in the parents and grand-parents.

One sister is a dementia precox case and on the maternal side there is a history of arterial de-

generation. The patient's early history was fair. He began his schooling at six years of age and finished high school. His appetite has always been good, his bowels regular and so far as known nothing was thought wrong with the urine.

A year ago he began to have pains in the top of his head and a tired and worn out feeling. About 5 months previous to the extraction of the teeth, the patient began to be nervous in the sense that he was restless and showed his constitutional defective condition more than formerly. He began to have peculiar religious ideas; he thought he was ordained to be a minister, and began preaching on a small scale and in an odd and peculiar way. About eight days before admittance he was taken to one of the larger clinics of this country and there upon examination was advised to have his tonsils and all of his teeth removed, as those in charge of the clinic thought that these organs were the cause of his trouble. The suggested operations were performed.

Immediately following them the patient became greatly disturbed. The pain in the top of his head increased in severity, his weakness became greater than it had been; he was quite confused and lost a great deal of weight.

Physical examination on admittance showed a rather small cranium, sallow complexion, dilated pupils, slight deafness in the left ear, badly inflamed nasal passageway, all of the teeth lacking, gums in fair condition excepting where there was some pus exuding about one of the old cavities. The palate was inflamed and with a considerable amount of pus about the stumps of the tonsils. The tongue was coated, breath very foul, thyroid considerably enlarged in all parts, and on the left side of the thorax there was a depressed scar due to the drainage of an empyema at the age of seventeen. Breath sounds were good in the right lung, but very poor in the left. The heart was rather slow in its action, excepting when the patient became excited and then its activity was greatly increased. The abdomen was generally negative. Liver was possibly slightly enlarged with a considerable amount of fecal material packed in the colon. The pelvic organs did not show anything of an exceptional nature. The patient's hands were large and the palms sweaty. Pupillary reflexes were active and the patellar reflex greatly increased. Patient had a bad odor coming from his body.

His mental state was that of a defective type of individual with a limited vision and horizon. His weight was 154½ pounds, but formerly had been about twenty pounds heavier.

Urinalysis showed a trace of indican and a slight trace of diacetic acid at times, but nothing else. The red cell blood count stood at 5,408,000, leucocytes 12,600. The haemoglobin index was 70 per cent.; the systolic blood pressure was 130, the diastolic 80, the pulse pressure 50.

The Wassermann of the blood, the gonorrhoeal

complement fixation and tubercular complement fixation tests were all negative.

Under reconstructive measures the patient gained materially in weight and bodily strength. His weak attacks seemed to disappear and much of the time his mental state was very good, but at no time did he totally regain his old mental self. Eventually, after several weeks treatment, he was permitted to return home. Here, after several weeks, he became disturbed and confused with his people and it was necessary to place him in a State Hospital.

This case illustrates several features. First of all, that we must always be on the lookout for the incidence of constitutional defective states, that are merging into marked psychoses. Our feeling is that the septic infection, engendered by the removal of the teeth and tonsils, the swallowing of the pus with the hemorrhage that kept up for some length of time, the loss of food, the shock of the operation, the change in his features, which worried the patient greatly, and his inability to wear the plates, all hastened a condition which was already slowly coming on and precipitated a psychosis which still makes it necessary to keep this young man under close surveillance all of the time.

We have seen numerous constitutional defectives who have been greatly disturbed by the extraction of diseased teeth, just as this young man was and we feel that it is questionable if energetic measures should be undertaken in patients of this type without preparing before hand for a possible mental disruption. If the teeth must be extracted we believe it best to do so by the step by step process, removing one only at a sitting.

Pre-Senile and Senile Psychosis.—The last type of case we wish to bring before you is the pre-senile type as illustrated by the following patient:

Male, 55 years of age, railroad engineer. Family history negative. Previous to his present illness the patient's health had been very good, until he was about 30 years of age, when he had stomach trouble which persisted for twelve years. He had had no accidents of any kind and no operations. His wife died about eight month preceding his mental breakdown. His bereavement proved to be a very great shock and he was greatly depressed following it, but gradually became a little more reconciled and his mental condition improved somewhat.

A short time before admittance all of his teeth were extracted, the thought being that the condition of the teeth was the cause of the patient's stomach trouble. Following this his condition became aggravated and his mental depression deeper. He grew weaker and more emaciated and constantly brooded over the loss of his wife, until at last he made ineffectual attempts at suicide.

Physical examination showed a smoky, yellowish complexion, a degeneration of the temporal vessels, nose somewhat inflamed, teeth lacking,

gums in fairly good condition, palate inflamed, tongue coated and dry, breath foul and glands below the jaw considerably enlarged. The thorax was greatly emaciated, and the breath sounds were poor in the upper portion of both lungs, with a few rales scattered through the lungs generally. His heart was considerably dilated; the pulse rate was low. His abdomen was scaphoid, with a partial hernia present.

Considerable tenderness was present in the pyloric region of the stomach. The liver was diminished in size, while the large intestine had a considerable amount of fecal material present in it, but the pelvic organs were negative. The inguinal glands were considerably enlarged. The arms were emaciated and the radial arteries showed a large amount of degeneration. The legs were cyanotic, with a marked degeneration of the vessels. Pupillary reflexes were active and the patellar reflex was greatly increased. The skin was very harsh and dry and the patient was very emaciated.

The blood Wassermann test was negative; the gonorrhoeal complement fixation test of the blood was three plus positive, and the tubercular complement fixation test was one plus positive.

The urine showed large quantities of indican and diacetic acid present and a few bacteria at times.

The red cell blood count was 5,472,000, leucocytes 6,800. The hemoglobin index was 60 per cent. The systolic blood pressure was 126, the diastolic 80, the pulse pressure 46. His weight was 121 pounds. Theoretically it should have been 148.

Patient had a great deal of trouble eating, not only because he did not want to eat but also on account of the condition of his mouth. The plate could not be kept in place and the patient was greatly distressed over his appearance.

After several weeks of careful feeding and up-building he became considerably brighter mentally; ceased his suicidal attempts and began to take some interest in things about him; eventually reaching a state in which he could be at home with his people.

Our feeling was, though, that in this case the brain had become seriously disturbed by the continued lack of food on account of his inability to take nourishment, owing to the absence of teeth, and that, the chances were small that he would make complete recovery.

All senile and pre-senile cases, as a general rule, have much difficulty in securing enough food to keep themselves properly nourished. With the extraction of the teeth the ability to take such food as they can is greatly lessened. Consequently those conditions which bring about senile psychoses are increased and the patient succumbs to the mental degeneration very rapidly. As already stated there are many other types of disorders aggravated or precipitated by the extraction of teeth, but we cannot go into detail here.

CONCLUSION

In conclusion then we feel that, (1) the extraction of teeth should be undertaken with the same caution and precaution with which we undertake any surgical procedure and if many teeth are to be drawn the patient should be examined and studied as for any other hazardous major operation.

(2) Patients already laboring under toxic states, especially metabolic toxic conditions, should have teeth drawn with even greater caution. (3) Patients with constitutional defective states, merging into psychoses, should have the teeth drawn with due caution and usually by the step by step method. (4) Senile and pre-senile individuals, who are already having a great deal of difficulty in securing a proper amount of food to nourish their brains, should have the teeth drawn only when satisfactory arrangements have been instituted to maintain their nutrition. All psychotic and neurotic individuals should be considered thoroughly from the point of aggravation of their trouble before teeth are ordered extracted.

WHITE OAKS FARM.

NEW AND NONOFFICIAL REMEDIES

Suprarenalin.—A. brand of epinephrine, N. N. R. (see New and Nonofficial Remedies, 1921, p. 107). Marketed only in the form of Suprarenalin Solution.

Sterile Ampules of Benzyl Benzoate.—H. W. & D. 0.5 Cc.—One cc. contains 0.5 c.c. benzyl benzoate—H. W. & D. (see New and Nonofficial Remedies, 1921, p. 61), diluted with olive oil. Each ampule contains more than 1 c.c.—Hynson, Westcott & Dunning, Baltimore, Maryland.

Silver Diarsenol.—A brand of silver arsphenamine, N. N. R. (see Jour. A. M. A., May 7, 1921, p. 1312). Silver Diarsenol is marketed in ampules containing respectively 0.05 Gm., 0.1 Gm., 0.15 Gm., 0.2 Gm., 0.25 Gm. of silver diarsenol. Diarsenol Co., Inc., Buffalo, N. Y.—(Jour. A. M. A., May 14, 1921, p. 1353.)

Mercurochrome-220-Soluble.—The disodium salt of dibromo oxymercury fluorescein, containing 23 to 24 per cent. of mercury. Mercurochrome-220-Soluble is a strong and rapidly acting germicide. It is active in urine 1 : 1,000 solution, killing *Bacillus Coli* and *Staphylococcus aureus* in this medium in one minute. It penetrates the tissues readily. The drug is tolerated in a strength of 1 per cent. by the bladder, renal pelvis and urethra. A 2.5 per cent. solution applied to the anterior urethra causes only temporary discomfort. The toxicity, when tested by intravenous injection into rabbits, is rather high. Mercurochrome-220-Soluble has been used in cystitis, urethritis and in chancroidal ulcerations; also in affections of the eye and ear.—Hynson, Westcott & Dunning, Baltimore, Maryland.—(Jour. A. M. A., May 21, 1921, p. 1403.)

The Treatment of Cataract*

Lt.-Col. Henry Smith, C.I.E., I.M.S., Amritsar, Punjab, India

Editor's Note.—Truly great men are the most modest even in the moments of their biggest triumphs. The Ohio State Medical Association complimented itself in having Lt.-Col. Henry Smith as the guest and orator of the Eye, Ear, Nose and Throat Section, and he not only lived up to expectations but exceeded them. With rare discretion and discernment he presented, to the gathered specialists in attendance, a telling survey of the advantages and disadvantages of the capsular and intra-capsular operations. He showed a full appreciation of the value of controversy and presented the views and practices of his rivals as well as they could have done themselves. He paid a tribute to our own Dr. J. W. Wright, who about 1884, was perhaps, the first to extract cataract in the capsule by expression. Detailing the evolution of the capsulotomy operation, Col. Smith then proceeded to compare the technique, scope and limitations of the two operations and entered into a detailed discussion of such complicating factors as iritis, after-cataract, discission, iridectomy, vitreous escape, the pupil, dressings, and the assistant. He also described the method and erisiphake of Barraquer and complimented the Barcelona specialist on his results. Col. Smith concluded with a tribute to his Indian patients and held that cataract being a yellow peril and that as close on to 25,000 cataracts a year were being done by the intra-capsular method in the East, that India would have a determining voice in the decision regarding the relative merits of the rival operations.

I CANNOT say how much I appreciate your kind and complimentary invitation to address you on an ophthalmological subject and for the hospitality and kindness you are extending me. It gives me great pleasure to meet so many distinguished members of our profession. I feel that in addressing you today I am addressing the whole ophthalmological world.

THE VALUE OF CONTROVERSY

I propose to open a discussion on the relative merits of the two leading methods of dealing with senile cataract, mature and immature. This, I presume, we all regard as the great issue of today in ophthalmology. That it is a burning issue is clear from the vehemence that is displayed in the ophthalmological press. Quotations are oftentimes gathered from men who have little or no practical experience with this intensely practical subject even though they have written books and have honored names in other departments and on the strength of such quotations is used such language as "extraction of cataract in the capsule under conditions existent in a civilized country is utterly inexcusable." The capsulotomy school do not all use quite as strong language as this. Another writer lays down the dictum on this subject that the literature on a matter of this kind is always favorable to anything new. Does any one really hold that the intra-capsular operation has been received in this way? Does any one hold that Listerism was received with open arms when it was new? Does any one hold that Litholopaxy when introduced by Freyer and Keegan using the instrument devised by your own great citizen surgeon (Bigelow) was received favorably by the genito-urinary surgeons of the world? No! These and all similar innovations on time honored practice have been received with the utmost hostility.

I do not think that we advocates of the intra-capsular operation have any more or less to complain of than innovators in other departments of surgery nor do I think that we or any one should complain of destructive criticism. Controversy has its place and a most useful place in the evolution of such matters and I welcome all controversy which will assist us in sound thinking, and assist us in arriving at a sound verdict and thus contribute to progress.

EVOLUTION OF THE CAPSULOTOMY OPERATION

The capsulotomy operation of today is practically where *Daviel* left it. Details have come into existence and gone out of existence with all the frequency and ease which befall philosophic theories. All the same, *Daviel's* operation is substantially the capsulotomy operation of today. A new detail does not make a new operation. We are told that *Daviel's* operation has held the field since 1745. Its advocates should state that, while it came into existence in 1745, it was not practised to any extent until *Joseph Lister* had established his case and that extraction by capsulotomy in a general sense only commenced to supplant *lens couching* in the early eighties. The late *Sir Jonathan Hutchinson*, (who founded Moorfields in London), told me that they would never have departed from couching in London but for the fact that the vision (following couching) rapidly failed, and finally vanished. He was the first man, I have come across, who was aware that progressive atrophy of the retina invariably followed the best results of lens couching (night blindness). It was Listerism and cocaine which gave the great impetus to the extraction of cataract.

The younger members of the profession have to be reminded that the capsulotomy operation, as we know it, has only been extensively practised for the past forty years. You will thus see that of these two rival operations the capsulotomy operation is not so very much older than the intra-capsular as we do it in India today.

*The Oration on Ophthalmology delivered before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4, 1921.

which dates from the nineties of the last century.

The capsulotomy operation had however a good start as soon as it was practised extensively, as it had been taught and had been before the professional mind from 1745 as a desideratum. The intra-capsular method, since I commenced to advocate it and to teach it, is hardly twenty years old. I do not claim to be the first man to do intra-capsular extractions. Macnamara, in Calcutta, and Pagenstecher extracted cataract in the capsule by lifting it out on a spoon. I think the first to extract cataract in the capsule by expression, in a limited proportion of cases, was an American, Dr. J. W. Wright, of Ohio, who published a paper in 1884. Shortly after this Malrony did practically the same operation on almost all his cases. It is a pity that Wright's work did not attract more attention even in his own country. Malrony did a vast amount of excellent work, but did not write at all, and thus his experience is lost to the ophthalmological world. I have never seen him operate. Neither Macnamara nor Pagenstecher's method appealed to me. Wright was unknown to me. Malrony's results I had seen but not his methods. I also saw that patients could on occasion squeeze out the lens in capsule successfully themselves. The results of the patients efforts were excellent. I proceeded to imitate the accident and evolved what I have done independently of any one. This method may be only in its infancy yet but it promises to be a hardy youth.

We are told that we are received unduly favorably. This is not so. When I read my first paper, at the British Medical Association meeting, in 1903, on an experience of 6,000 cases I was received with icy coldness. I was at the head of a list for a paper before the British Medical Association, in 1908. There were 6 or 7 unimportant papers to follow. At the commencement of the sitting the President said, "I shall reverse the orders of the papers," which left my paper to be taken as read. This was surely not unduly friendly to say the least! However, I have not always been treated with such scant courtesy.

Dr. Hermann Knapp is a name which you all revere, his results are frequently put forward with the implication that intra-capsular extraction could not give better results. It may surprise American ophthalmologists to hear that, after he read the paper I brought before the British Medical Association meeting in 1903, previously alluded to, he wrote to me:—"If you can devise a method to extract cataract in the capsule you will be a greater benefactor to mankind than Daviel. If I were not over 70 years of age and in delicate health I would go round the world to see how to do it."

This was the first word of encouragement that I received from ophthalmologists and that letter is the foundation of the welcome I have given to

American ophthalmologists in Jullunder and Amritsar.

ADVANTAGES AND DISADVANTAGES OF THE RIVAL OPERATIONS

I will now put before you, in a general way, the advantages and disadvantages of these two rival operations.

Intra-capsular extraction is only within the range of men who have had high-class technical training in the art. It is a difficult operation. The capsulotomy operation is a relatively easy and simple one. Intra-capsular operation requires a skilled assistant. The same amount of skill is not required on the part of the assistant in the capsulotomy operation.

Any incision if large enough for intra-capsular extraction and any flap will do equally well in either operation according to the preference of the operator. Similarly an iridectomy or no iridectomy may be done.

The intra-capsular procedure can be done with equal ease at any stage of maturity.

In the capsulotomy operation the cataract should be mature.

After-cataract follows the capsulotomy operation and requires to be operated upon. There is no after-cataract following an intra-capsular operation.

Iritis is a frequent complication after capsulotomy but is practically absent after the intra-capsular operation. Vision is better after intra-capsular than after capsulotomy. Vitreous escape, in skilled hands, is about the same in both operations.

Sepsis more frequently follows the capsulotomy operation often due to tags of capsule left in the wound.

Two disadvantages of the intra-capsular operation are (1) a somewhat larger proportion of prolapse of iris in the non-iridectomy cases, and (2) a slightly drawn-up pupil in the iridectomy cases.

DETAILED DISCUSSION OF COMPLICATIONS

Choroidal detachment is equally common to both. I would like now to go into a few details with you.

Iritis.—Before I raised this issue in 1903, it was the generally accepted view that iritis, following cataract extraction, was due to the bruising of the iris in the process of extraction. I stated that that chapter would have to be rewritten as iritis did not follow in one in 500 cases in extraction of the lens in capsule through an entire pupil which had not been acted on by a mydriatic, though there must of necessity be much more bruising of the iris in the latter case than in the capsulotomy operation. Iritis, therefore, is caused by the lens matter and capsule left behind in the capsulotomy operation as I have often previously laid down. This view has, since that date, been accepted but no credit has

been given to intra-capsular extraction for demonstrating this fact. I now go further and say that it is caused more by capsule left behind than by lens matter. This is evidenced by the fact that when the capsule bursts, in the intra-capsular extraction if we are able to extract the capsule and yet leave a little lens matter behind (as is often the case) iritis does not follow, but if the lens capsule is left behind iritis frequently does follow.

Since intra-capsular extraction came prominently into the field our opponents of the capsulotomy school tend to make little of iritis, both of its frequency and of its consequences. In my observation it is more frequent than many of the papers published would lead us to believe. It is not an unimportant complication. I consider iritis a serious complication causing the iris to be cemented to the after-cataract and the pupil often to be occluded with a dense membrane, if no more sinister consequences happen. I have seen any number of such cases operated by most experienced operators in India, such patients being told that nothing more can be done for them. If you gentlemen who operate by the capsulotomy method do not often come across such cases you are highly to be complimented. Time does not permit me to deal with the treatment of after-cataract of this nature. After-cataract is a subject for a whole sitting in itself.

After-Cataract.—If you refer to the journals of the past, you will observe that before the year 1903 the treatment of after-cataract was the evergreen of ophthalmological meetings. Before that date the treatment was regarded as serious, from the point of view of the patient, as the extraction of the cataract itself. Mr. Richardson Cross opened a discussion on this subject at the British Medical Association meeting, in 1901, in which he laid down that the ideal extraction of cataracts was in the capsule but that that was not possible and this was tacitly admitted by the meeting. So much for the significance of the after-cataract at that time. Since 1903, if you look up the discussions on after-cataract you will notice the change that has come about. It has hardly appeared as a full dress subject at any meeting. You would infer that today it is a trifling, unimportant proceeding associated with no sinister results.

When we consider that Listerism applied then as it does now and that the same instruments and methods were used then as now, the position seems inexplicable.

In my observation just as severe forms of after-cataract occur now as did then and as severe results are associated with the needling of them. The removal of a portion of the anterior capsule having become more fashionable than it was then may render the after-cataract a little less dense in the case of mature cataracts, but when we recognize the fact that since intra-capsular extraction came into the field for any

stage of immaturity, the policy of extracting by capsulotomy of immature cataract has also come into the field with the result that in these cases the after-cataract must be dense and must be dealt with so that in my opinion dense after-cataract is as frequent as ever it was.

This view is supported by the fact that in the United States you have advocates who laud the introduction of needling an immature cataract so as to cause it to mature in a day or two. This fact is evidence that it is recognized that a dense after-cataract follows the same process in America that it does in India. To my mind this method only needs to be mentioned to be condemned. Such a proceeding deliberately produces a traumatic cataract. Who has ever seen a traumatic cataract in a patient without a violent iritis? I have not and I have seen many of them. I go further and say that these are the most difficult of all cataracts to deal with. If we decide to extract the immature cataract we must put our courage together and extract it in the capsule.

The Incision.—One of the objections raised against intra-capsular extraction is that the incision is of necessity too large, not exceeding 180°. This conclusion would imply that it interferes with the nutrition of the cornea or causes an objectionable amount of astigmatism or is followed by a greater percentage of septic cases than the smaller incision used in the capsulotomy operation.

With my enormous experience I can state that not one of these premises is based on fact. Those who advance these conclusions do not advance a single fact to support their premises. They say—this must follow or that must follow—but “this” and “that” do not follow when examined by hard facts. Our opponents say that we cannot do intra-capsular extraction with a conjunctival flap. This is nonsense, we can do it with any flap or any incision provided it is large enough. Much is made, by the way, of the powerful nutritional influence of conjunctival flaps. I saw a dexterous operator do intra-capsular extraction through a Czermac’s incision. He subconjunctively cut two-thirds or more of the sclero cornea with scissors. I saw a number of such cases several days after operation. They demonstrated that the nutrition of the cornea does not depend on the conjunctiva as every case had extensive patches of starvation opacities which would never recover. These starvation patches do not follow when the incision does not exceed 180° of the sclero cornea without a conjunctival flap. It is thus evident to me that the nutrition of the cornea for practical purposes is not through the conjunctiva.

Iridectomy.—It is also advanced against intra-capsular extraction that we cannot do this operation without an iridectomy. This is not so, we can do it through an entire pupil uninfluenced by a mydriatic just as well as with an iridectomy. We can go further, we can do it well in cases in

which the iris is tied down to the lens by iritic adhesions. In this latter case if you extract by the capsulotomy method you will have violent iritis and its consequences in every or almost every case. You will thus see that our limitations are less than those of our opponents.

Vitreous Escape.—This is the great issue, our opponents would seem to have much less of this evil than formerly was the case, but on the basis of large series of figures, reaching back into the nineties of last century, they have to admit 7 per cent. incidence of this complication. A skilled operator by the intra-capsular method should not have more. In intra-capsular extraction with control of the eyelids as we do it, when vitreous escapes it would be of small amount. In my observation escape of under a third is not followed by sinister consequences. I think the capsulotomy operators will admit that when they have escape of vitreous it is considerable in amount, as they do not control the pressure of the eyelids as we do. The consequences of escape of vitreous in these two operations are quite different. In the intra-capsular we do not fear iritis or irido-cyclitis as a consequence, our opponents have to admit that when vitreous escapes they have at once to close down leaving the capsule and a considerable amount of lens matter in the eye and that under such circumstances they have as frequently a severe iritis or an irido-cyclitis. Our opponents say that when vitreous escapes it is not renewed. How do they know? Why make such a statement in an offhand way when it is based on the absence of knowledge. The physiology and pathology of the eye are hardly in their infancy, we must admit that from birth to mature size the vitreous body has grown. This implies a physiological mechanism through which it has grown. The statement that vitreous is not renewed after escape implies that that mechanism has ceased to exist when the vitreous has reached mature size. How do they know? *They do not know.* I saw not long ago a horse breaker who had both lenses extracted in capsule fifteen years ago. In each eye there had been considerable escape. I examined him. His vision in each eye was better than 6-6 and there was no sign of degeneration. How does the above assertion fit in with such a result. The reverse could far more plausibly be held.

The Pupil.—In non-iridectomy cases, the pupil is as central in one operation as the other. In the case of iridectomy the pupil is more central in the old operation than in the intra-capsular and occasionally much more so. If you use a mydriatic in the old operation afterwards you will observe that the pillars of your coloboma are practically always tied down to the after-cataract by adhesions though it may be comparatively free elsewhere. This is the cause of the keyhole pupil. The entire pupil contracts on the center, the iridectomy pupil (if there are no adhesions as in the intra-capsular cases) contracts on the

point of attachment of the iris to the ciliary region. This mechanically straightens out the key hole into the shape of a U and of necessity draws up more or less the lower part of the pupil.

My ambition is to be able to do without iridectomy entirely, I hope to be able to accomplish this object by finding some drug or some method which will paralyze the orbicularis muscle for five or six days after operation. It is the contractions of the orbicularis which are the cause of the prolapse of the iris. I hope other workers will devote thought and energy to this issue which I consider one of the most important on cataract extraction as it stands today. Among other things it will eliminate the necessity of an assistant.

Dressings.—It is advanced against us that we do not dress and inspect our cases often enough. We must remember that this is one of the most major operations of surgery. Iritis we do not have. The only complications are sepsis, choroidal haemorrhage and prolapse of iris. In my observation sepsis and choroidal haemorrhage defy treatment; besides such cases give indications and naturally are inspected. Prolapse of iris may give no indication and is much better left alone for ten or twelve days as interfering with it earlier may cause the patient to burst open the whole wound and has no other advantage.

Why should we reverse the canons of surgery by dressing and inspecting wounds daily? By doing so we are depriving the affected area of surgical rest—such daily dressings are meddling surgery.

The Assistant.—We are accused of requiring a skilled assistant. What general surgeon would listen to such an argument. We are also told that to be a perfect operation it must be such that any ophthalmic surgeon can do it as well as any other. Does the general surgeon say that Dr. Cushing's proceeding of dealing with a diseased hypophysis is bad because very few will attempt it? Does the general surgeon say that excision of the Gasserian ganglion is bad because very few will attempt it? Still, I hope that the day is not far distant when intra-capsular extraction will be considerably simplified.

THE ERISIPHAKE AND THE METHOD OF BARREQUER

I recently visited Dr. Barrequer in Barcelona. He received me with the whole-hearted kindness and courtesy of a Spanish gentleman. Dr. Fuchs Senior was with him. He operated on a few cases before us with his *erisiphake*. It acted beautifully. He insisted that I should operate also to show him how I did the operation in India. Mine came out as easily and as perfectly as his, and in both cases with the minimum of violence. We three were agreed that in the hands of the two experts there was nothing to choose between

them. Dr. Barrequer's instruments may not require as highly a skilled assistant as my method. On the other hand—it is a highly complicated apparatus with plenty of possibilities of going wrong at a critical moment in the hands of a man who has not thoroughly mastered its mechanism and whose fingers have not grown to act automatically.

The instrument requires a technique of its own. Those who have mastered my technique, I am confident, will have no difficulty in using it as a good deal of the technique is common to the two methods. They are complimentary to one another. The erisiphake is but in its infancy and we have yet to see if it will master certain classes of cases as well as the older intra-capsular method, but in most cases I have no doubt it will act beautifully and be a simpler method to acquire skill in. I was immensely pleased to meet Dr. Barrequer, a whole-hearted believer in intra-capsular extraction and to see him use his instruments. It has in my opinion come to stay and will help to make matters move on.

I congratulate Dr. Barrequer on all the energy and zeal which he has devoted to making this method perfect. When Hulen's instrument came out, I tried to get one as the method appealed to me. Throughout the war we could get nothing of the kind done in England.

INDIANS AS PATIENTS

It has been repeatedly advanced that what will succeed in Indians—an uncivilized people—will not succeed among nor satisfy a civilized people such as the white races. Those who write thus seem to be unaware that Indians belong to the Aryan race to which we also belong, and that they were a highly civilized race long before Europeans were. You have only to read Hindu and Buddhist philosophy to find this out. As regards the whole range of surgery the people of India measure your worth by results and as much as the people of Europe or America do. It is on this basis that litholopaxy supplanted lithotomy in the last two decades of the last century. It is on this basis that intra-capsular extraction of cataract has got the upper hand over the capsulotomy method in India. To assume that you can cut or hack about Indians in any way you please and that they will recover shows gross ignorance. As a matter of fact they are not as good subjects for operation as Europeans. Their vegetarian diet I presume is the cause. This is best defined in the operations subject to surgical shock. It is not uncommon in the west to see an operator spend one and a half to two, or even three hours on an intra-abdominal operation and for the patient to recover as a matter of course. In an Indian if you expect a similar operation to be successful you must not spend over an hour on it and if you do it in half an hour your death rate will not be nearly so large. The principle herein involved is the same all down the line,

cataract included. The Indian has not anything like the same recuperative power as the European.

CONCLUSIONS

It is often advanced by implication that my facts are worthless because I am overworked, and that by men who are not aware that cataract is but part of my work. I had once a distinguished member of the profession on a visit, when leaving he told me that he wondered how I got through the work, but he now understood. He said, "you are not overworked, you are not hustled; it is your organization that is the explanation, every one about you has got his job and knows it, and has got to do it leaving what you want to yourself." After thirty years on the plains of India I do not look like a man who has been overworked.

As regards my facts, I have satisfied myself. I have published statistics of cases selected before operation which should satisfy the most fastidious. To publish the details of between 40,000 and 50,000 cases would make up a volume in itself, which I presume no one would read.

Those who have visited my clinic have seen everything, there was nothing concealed from them.

As regards the status of intra-capsular extraction of today, views expressed in papers of the west are misleading and take too narrow a view of the outlook. It is a yellow peril. I think I am not overstating the case when I say that close on 25,000 cataracts a year are done by the intra-capsular method in India and that ten years hence we may have to add another ten thousand. Thus India will have a voice in the decision. It has come to live and dominate its opponent in the whole east, and in my opinion will come to be *the operation* the world over twenty years hence.

PROPAGANDA FOR REFORM

More Misbranded Nostrums.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the claims advanced for them were held to be false: Murphey's Second Summer Remedy (Murphey Medicine Co., Inc.), an emulsion containing alcohol, sugar, castor oil, plant material and traces of peppermint oil and morphin.—*Jour. A. M. A.*, May 21, 1921, p. 1417.)

Hexamethylenamin and Sodium Acid Phosphate.—Hexamethylenamin acts in acid urine only. Hence, if the urine is not acid, sodium acid phosphate should be given in doses of 1 to 2 gm. midway between the doses of hexamethylenamin. Enough of the sodium acid phosphate should be given to render the urine acid, but not enough to cause diarrhea.—(*Jour. A. M. A.*, April 9, 1921, p. 1031.)

Present Day Conclusions on the Etiology, Clinical Diagnosis and Surgical Treatment of Senile Cataract*

Robert Sattler, M.D., Cincinnati

Editor's Note.—In the estimation of Dr. Sattler, of the many schemes and suggestions of honest and dishonest purport pertaining to the medical treatment of cataract, which have been foisted on an expectant and gullible public, it can be frankly stated that one and all have proved absolutely barren of conclusive results. Furthermore the multiplex means, other than surgical, to bring about permanent improvement or practical restoration of vision, have not the sanction of those members of our profession, entitled to advance a reliable and disinterested opinion through their large experience, impartial judgment and fair-minded understanding of this important question of cataract. It has practically become axiomatic, according to Dr. Sattler, that every case of senile cataract with commonly accepted surgical risks, is operable. It is not the textural alterations of a partial or more or less general opacity of the lens which decide the question of an immediate or deferred operation for its extraction, but the degree of helplessness or the ocular infirmity of an individual which is thereby induced.

THE public mind regards and accepts the onset of cataract, its advancing impairment of vision as an occasional or not infrequent encroachment of senility with, however, otherwise undisturbed physical and mental activities.

CONFUSION REGARDING SENILE CATARACT IN LAY AND UNINFORMED PROFESSIONAL MINDS

With equal assurance a pervading general intelligence almost simultaneously suggests and promulgates another truthful conclusion, that a successful operation can, in most cases of cataract among the aged, be relied upon to restore impaired or lost vision and avert an otherwise lasting helplessness.

Both are current and commonly accepted conclusions.

On an equal footing of public attention, an erroneous one holds sway—that senile cataract can be averted or cured through local (eye) and general (internal) treatment. As this belief is fostered by the so-often exaggerated credulity of age it should evoke little surprise when it gains eager and widespread acceptance.

Of the many schemes and suggestions of honest and dishonest purport pertaining to the medicinal treatment which have been foisted on an expectant and gullible public, it can be frankly stated that one and all have proved absolutely barren of conclusive results. Furthermore the multiplex means, other than surgical, to bring about permanent improvement or practical restoration of vision have not the sanction of those members of our profession entitled to advance a reliable and disinterested opinion through their larger experience, impartial judgment and fair minded understanding of this important question.

Two eagerly heralded additional conflicting conclusions have caused much unnecessary confusion in lay and uninformed professional minds.

The first holds, that opacity of the lens or "cataract" must have reached a vague stage of

"maturity" of ripeness before it is expedient to seek "advice," much less to resort to an operation. This is opposed by another which is equally assertive—that so-called unripe or immature cataract can be successfully relieved without this long period of waiting, if a patient will only seek and find the right ophthalmic surgeon whose *superior* method of operating and diagnostic acumen enable him to accomplish this feat which is denied to most of his professional colleagues, a subtle inference suggesting that lens delivery as part of a new method, i. e., Smith-Indian (in capsule), can accomplish this; which of course is undeniable.

The small element of truth which at the present day supports both conclusions is often grossly misrepresented and, on the part of the latter, for the evident purpose of profitable exploitation of self-importance of a smaller number of ophthalmic surgeons.

For these reasons, we need not be amazed that patients and surgeons line up in two distinct camps, or that the minds of the senescents and seniles and their interested friends are beset by disturbing doubts at these opposing statements in their necessary search for reliable advice and subsequent course of action as to an immediate or later operation; which, if the patient's life is prolonged must sooner or later follow a just discovered or longer existing impairment of vision.

CATARACT—A SENILE NUTRITIONAL ABERRATION

A long absurdly tolerated terminology designating cataract as immature, mature or hypermature is wholly responsible for this. Such appellations are misleading and at variance with existing textural alterations and clinical facts as will be abundantly and conclusively upheld by examination by transillumination and transmission of light.

The transformation which is slowly and inexorably taking place, from partial to general loss of a former transparency in the lenses of an aged person, is the very opposite of an exuberant nutritional activity of the vascular and lymph channels or approaching or accomplished growth or maturity of an organ or living structure, but is,

*Read in the Symposium on Cataract before the Eye, Ear, Nose and Throat Section of the Ohio Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4, 1921.

as commonly accepted, a senile nutritional aberration, akin to cell or lens band extinction, dessication of the connecting cement substance from defective water or lymph absorption, loss of elasticity or a variable degree of hardening or sclerosis and less frequently, a softening or solution of a former textural firmness of the anterior and deeper layers of the lens body substance, often even with reduction to a liquid, milky fluid with the remaining harder central portion or nucleus a free or floating mass.

This abrogation of special privileges, the glaring indiscretion of a smaller number fortunately, in the surgical management for the class of cases in question is both unfair and unjust and has from the first been peremptorily discredited and ignored by every fair-minded ophthalmic surgeon of this country, who has had, not only a training in general, but in particular in ophthalmic surgery, which represents the confirmed and approved teaching of von Graefe and hosts of followers and students of more modern times.

Without claiming this as a glorifying distinction for one or both it must in all fairness be stated that there are as many known and fairly established successful extractions of so-called unripe or immature cataracts relatively speaking, to the credit of the latter longer practised or extra-capsular method as to the newer intra-capsular one.

SELECTIVE METHOD OF CATARACT EXTRACTION

Above all, the following conclusion embraces the united confirmed opinions, that as in the past, every progressive and experienced ophthalmic surgeon will continue to extract, in the present and in the future, cataractous lenses which are only partially opaque or those in which the clouding is not general if this condition spells ocular infirmity with the impossibility of continuing wonted activities for his patient. He will select, as we all do, the safest means of lens delivery which present day surgical standards uphold as most approved, irrespective of method. He will be guided only by a safe and sober general intelligence and will direct his own course in support of the foremost modern conclusions of this important subject which represents, in name and in fact, a modern truth to every one who has the mutual interest of humanity and surgery at heart and hand:

That every case of senile cataract with commonly accepted surgical risks is operable. That it is not the textural alterations of a partial or more or less general opacity of the lens which decides the question of an immediate or deferred operation of its extraction, but the degree of helplessness or the ocular infirmity of an individual which is thereby induced.

FOREMOST DISCOVERY OF OPHTHALMIC SURGERY

The most valuable present-day conclusions as to the surgical treatment of senile cataract cen-

ter around the now generally accepted feasibility of lens extraction in its unbroken capsule. *

Every one present here knows that surgery and humanity alike are indebted to our illustrious guest, Lt.-Col. Henry Smith, for his signal discovery which parallels, in originality and importance, the cardinal features of extra-capsular delivery, the original or first method of extraction and the supreme discovery of Daviel's genius. In his memorable announcement of his ultimate discovery of a safe and facile means of intra-capsular lens expulsion, Lt.-Col. Smith makes this the dominant feature of his self-devised method, which in his own hands in India and those of his followers and students, has proved such a momentous and beneficial force in restoring blind from senile cataract to useful vision and to their wonted activities. This method of extraction and in particular its cardinal point, or the technical execution of lens expulsion in its intact capsule, will with longer understanding of its practical importance, be regarded as among the greatest achievements of modern ophthalmic surgery.

It has with many and will soon become the resolute aim of every progressive ophthalmic surgeon, to adopt or combine this new means of lens expulsion in its intact capsule, with due appreciation of its limitations, but with even fuller consideration of essential present-day surgical facts, whether he selects the Smith-Indian method as such, or any other modernized classical one, if a thorough general and special surgical training, deftness of hand, perfect vision and resolute judgment on his part can be counted upon.

If for evident reasons an extra-capsular lens delivery is decided upon, essential surgical facts must be kept prominently in mind and the foremost attention of the operator must be centered on the opening incision. Its safest location is at or near the limbus corneae, it must not encroach too much or too little on the scleral territory behind or the cornea in front and above all it must have a generous amplitude. It matters less whether acquired ingenuity and skill can add a conjunctival flap. Furthermore the iridectomy should be clean cut and of ample dimensions with free limbs to the periphery.

If, on the other hand, an intra-capsular lens delivery is the intentional aim for a case in question, for the main reason that partial cataract with intumescence of the lens, with the objective presence of semi-translucent or transparent areas, is still in evidence besides the unmistakable textural alterations, the method of Col. Smith should receive foremost consideration as it will accomplish delivery in an intact capsule along safer lines with a less complicated technical execution and familiar instruments, unless uncommon complications arise.

NEWER MEANS OF LENS DELIVERY IN CAPSULE

Several new means of lens delivery in capsule have followed on the heels of Col. Smith's dis-

covery. Foremost mention belongs to the use of the Kalt forceps, serving for the double purpose of lens delivery *i.e.* to detach or rupture the zonular attachment of the lens and at the same time to seize in the right location a fold of the capsule in its toothless grasp and by deft manipulation, rocking or traction combined, deliver the lens in its capsule. This means of lens delivery has been proposed and successfully practiced by Arnold Knapp and with similar modification and capsule forceps by Tork and Verhoeff, Staniscleanu and others. The most recent modification of Barraquer of Barcelona, Spain, represents a more radical departure from present-day methods or virtually a return to the original operation of Daviel or its earlier modification by French, Austrian and Scotch surgeons.

In other words, the description of the new operation of phakoerisis corresponds to that of the old flap operation without iridectomy whenever expedient, but with a new execution for the removal of the lens in its intact capsule with an instrument which he calls an erisophake, through pneumatic suction on astounding proof of 1000 cases with surprisingly small losses.

After a candid review of conclusions and opinions imperfectly elucidated, fairmindedness will not decide in favor of one or the other method of cataract extraction, but will aver that all, so far as their cardinal feature of lens delivery is concerned, are relatively speaking satisfactory and yielding a fair average of successful results.

GROUPING CASES AND ADVANTAGES OF INTRA-CAPSULAR EXPULSION

In judging the physical characters of an opaque lens, with every diagnostic means at our disposal before an operation, which has for its purpose either an extra or intra-capsular extraction, we can safely be governed by two generally accepted facts: That cataractous lenses for which senility is the main cause in evidence, can be placed in two groups. The smaller one includes the large flat, uniformly sclerosed or dissicated lenses, dense in color, approaching amber or blackness, with sharp and hard equatorial borders and especially common among individuals of advanced age; these do not lend themselves to a ready expulsion in capsule for the inexperienced and these have been for most surgeons the stumbling block or the cause of absolute failure. If, however, selection be made from the larger or more numerous group, among which the lenses show a lighter color, but always with slight or greater tumefaction of lens substance and nucleus and rounding rather than angularity of the equatorial region, usually with the presence of translucent areas, as objective examination can in most cases conclusively establish, their purposive selection for an intra-capsular expulsion will be rewarded with successful and facile delivery unless uncommon happenings take place.

A brief summary will further emphasize the fact that if expulsion succeeds by the Smith-

Indian method, without uncommon complications, it is a first and final success. It completely prevents the escape or retention of lens and capsule tissue, it also eliminates prolonged and painful healing and as certainly, the ever deplorable post-operative consequences. It also insures an equal or larger proportion of uniform, painless recoveries, with more nearly approaching perfect or satisfactory results to patient and surgeon.

If an extra-capsular delivery and its capsular opening—no matter how spacious—is made part of the technic of a modernized method of an older or classic method of lens extraction, we can never be certain that it has been completely emptied of its contents. Often, in spite of the best illumination and clear operative field, the clearest vision of an experienced and deft operator, he will be unable to prevent with certainty the incarceration of wedged-in semi-translucent or of softer brittle and insoluble scales of lens corticalis.

These retained masses, now equivalent to foreign bodies, and the physico-chemical changes they induce through liberation of lens proteins, by their so-often destructive consequences, which we all know so well, often mar or reduce our otherwise partial or complete successes, which, however, compare as favorably, so far as visual results are concerned and from a surgical viewpoint even more so with similar ones of the intra-capsular method of lens expulsion.

THE GROTON.

PROPAGANDA FOR REFORM

Ludlum's Pasteg (Williams' Manufacturing Company), consisting of copaiba, cubebs, and oil of sassafras in a fatty base. Prickly Ash, Poke Root and Stillingia Compound with Iodids (Allan-Pfeiffer Chemical Company), consisting of plant extractives, including a laxative drug, potassium iodid, alcohol, sugar and water. Gauvin's Cough Syrup (J. A. E. Gauvin), consisting essentially of extractives of wild cherry bark, spruce gum, sugar, alcohol and water. Meyer's Red Diamond Kidney Tablets and Compound Extract of Sarsaparilla with Iodid of Potassium (Meyer Drug Company), the first containing salts of benzoic and boric acids, atropin and vegetable extractives, the second consisting essentially of a syrup containing caramel, vegetable extractives, with small amounts of potassium iodid, ferric chlorid and alcohol. Leonard Ear Oil (A. O. Leonard), consisting essentially of camphor, oil of eucalyptus, and traces of alkaloids in a base of liquid petrolatum.—*Jour. A. M. A.*, May 21, 1921, p. 1417.)

Eruption after Luminal.—Luminal has been reported by two authors as producing an exanthem simulating urticaria: by two others an eruption simulating measles: by three, as simulating scarlet fever: and by two, as an unclassified drug eruption.—(*Jour. A. M. A.*, May 28, 1921, p. 1517.)

Practical Points Emphasized in Lt. Col. Henry Smith's Technique for Intra-Capsular Cataract Extraction of Value in Any Method of Senile Cataract Extraction*

Clarence King, M. D., Cincinnati

Editor's Note.—Discussions of the Smith operation have usually centered in the question of its acceptance or rejection as a routine method of cataract extraction, and this tendency has diverted attention from the fact that many features of Smith's technique can be incorporated into the old operation with striking advantage. Perfection in details is a *sine qua non* to success in cataract surgery and it is for this reason that the use of Smith's method of preparation, flushing, fixation, incision, handling the lens and iris, as well as controlling the lids, offer so much in perfecting the old operation. While these features of the Smith operation, discussed by Dr. King, are but incidental phases of Smith's greater contribution in giving to ophthalmology and to humanity at large his method for intra-capsular extraction of senile cataract, they have been proved to be of extreme value in the older method and should be considered for adoption by all those interested in cataract surgery.

DISCUSSIONS of the Smith operation have usually centered in the question of its acceptance or rejection as a routine method of cataract extraction. This tendency has diverted attention from the fact that many features of Col. Smith's technique can be incorporated into the old operation with striking advantage. Every operator owes it to himself to devote the closest scrutiny to the details of any method which has received the sanction of Col. Smith's vast experience, and should endeavor to give his recommendations as wide an application as possible in his own practice. In making this effort, one will realize what a tremendous service Col. Smith has rendered to ophthalmology in stimulating oculists to strive for the attainment of the highest ideals in cataract surgery and in stifling that complacency which makes for contentment with present methods.

PERFECTION IN DETAILS A SINE QUA NON TO SUCCESS

In considering cataract surgery, one cannot help being impressed by the extent to which the success of the operation depends upon the perfection with which the details of technique are carried out. All eye surgeons have encountered difficulties during operations; and we know, theoretically and practically, the troubles that beset the knife of the unwary. On analyzing the cause of some occurrence which we might wish to have avoided, we almost invariably find that it had its inception in the failure of some seemingly insignificant detail of our procedure. After the ground-work of an operator's technique is established, it is in its details that we expect to modify it to advantage. This emphasis of detail will afford, it is hoped, some justification for a brief reference to technical points which are apparently trivial in a verbal description but which, as part of the sequence of a cataract operation, have a cogently practical importance.

It was the good fortune of the essayist to have spent a cataract season as Col. Smith's guest at Amritsar and to have had the privilege of doing two hundred and six intracapsular extractions under his supervision. To the observer of Col. Smith's work, it was manifest that in evolving his technique for extraction in capsule, he had made valuable contributions to cataract surgery in general. The observations that follow are derived from notes made at the time of the visit mentioned. Successive steps of the intracapsular operation are considered in relation to their availability for the capsulotomy method.

FLUSHING AND FIXATION

In preparation for the operation, Col. Smith's method of flushing the conjunctival sac attracts our attention. This preliminary can be employed profitably in any operation on the eye-ball, as the entire surface of the sac can be definitely exposed to the action of the flushing fluid. Briefly, the procedure is as follows:

The speculum is inserted and opened. In this position, it is drawn directly forward by one hand, thus lifting the eyelid from the eyeball; while the fingers of the other hand are occupied in grasping the eye-brow and sliding it upward. This manipulation exposes the fornix with the minimum of mechanical irritation to the action of the fluid used.

Two details characterize Col. Smith's method of fixation. He braces the ulnar side of his left hand and little finger against the patient's cheek and side of the nose. To use his own expression, he has "the feeling that he controls the patient's head between his hands." He points out that improper support of the fixing hand is often the cause of that pressure with the fixation forceps, which we all know is so disastrous. A second point typical of his fixation is that after he has taken hold in the usual position, he gives a quarter turn to his forceps. This manœuvre gives a more certain grip.

THE SMITH INCISION

There is an old French adage to the effect that *as the incision is, so is the operation*. Although some surgeons are not disposed to agree with

*Read in the Symposium on Cataract before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4, 1921.

this generalization, they will admit that the incision plays a predominate part in the success of a cataract operation. All who have worked with Col. Smith must have been impressed with his marvelous dexterity and facility in making an incision. To one who was familiar only with the traditional "to—and—fro" sawing motion, it was astounding to see, quite frequently, a section completed by one straight, smooth thrust of the knife without the least bit of withdrawal. It was immediately obvious that this facile motion was no mere spectacular flourish; for the symmetry of the section, the smoothness of its edges, and the ease with which it was completed, disclosed its many advantages in promoting the ready healing of the wound and in minimizing trauma. *The outstanding features of Col. Smith's incision are that it is made by finger movement only and that there is no short sawing back and forth. He crosses the anterior chamber slowly. Immediately after the counterpuncture is made, the handle of the knife is depressed; the knife is thrust upward; the up-thrust occurs more rapidly than the through thrust, and severs a large part of the inner, upper corneal quadrant. As the knife is farther advanced, the handle is elevated so that with the proximal end of the blade, the outer upper corneal quadrant is sectioned. This manipulation brings the blade horizontal; and if its cutting surface has been used up, a slight withdrawal suffices to cut the remaining corneal bridge. In some cases, at this point in the incision, advancement is still possible; and the section is completed by advancing the knife to the heel without withdrawal. This manœuvre implies a definite way of holding the knife. Col. Smith gives the following description:*

"In holding the knife, an operator should catch it as one holds a pen in writing and hold it, if anything, more lightly. His hold of the knife should be fairly long; that is, a good distance from the blade. The back of the terminal joints of the little finger should rest against the front of the temple and the ring finger should rest on the little finger and against the temple; the fingers and thumb, holding the knife when in the straight position as a pen in the act of writing, should now be drawn back without shifting back on the handle of the knife as far as convenient, so that they look in the position of a partially closed fist."

Wrist motion in the incision implies sawing and has not the delicacy of the finger motion. A section made principally by wrist action is the logical consequence of certain methods of holding the knife. A traditional hold of the knife which predisposes to wrist motion is described by Czermak in "Die Augenärztlichen Operationen." A translation is as follows:

"The knife is not held like a pen. It is gripped with the thumb on one side, and the index and middle fingers on the other side in such a way that the axis of the knife makes a right angle with the axis of the thumb. The elbow should be applied to the

body, and all movements should be made with the wrist."

It is to be noted that the thumb is extended and braced against the pull of the index and middle fingers. These methods are explicitly contrasted in order to direct attention to the fact that an operator may frustrate his purpose to make use of the delicacy of finger motion if he uses an unsuitable grip to which he had previously become accustomed. It may be useful in this connection to suggest that the maximum finger motion takes place in a cataract incision if the knife is held in the direction of the long axis of the fingers and thumb; and that the greatest restriction occurs if the knife is held with a short grip at right angles. Briefly, Col. Smith's incision is a thrust with the fingers, a withdrawal taking place if necessary. Its merits commend it to our careful study.

HANDLING THE LENS AND IRIS

A consideration of the cataract incision naturally turns our attention to the lens that must pass through it. Many operators are skeptical as to the possibility of making an accurate prediction about the contents of the capsular sac; they look upon any forecasts as having no value in practice. In Col. Smith's clinic, great attention was paid to the probable size, shape, and consistency of the lens. In certain typical cataracts, an accurate prediction could easily be made. Attention to this detail by the operator during the capsulotomy extraction will very often enable him to be prepared for an emergency which might otherwise take him by surprise.

One feature of Col. Smith's method of iris reposition can be worthily applied to the old capsulotomy operation. In replacing the iris after iridectomy, Col. Smith not only strokes the pillars into position in the usual way but also passes the repositor upward in the direction of the ciliary body to free the root of the iris from the upper lip of the wound. He lays great stress upon the fact that during this manœuvre all pressure must be removed from the eye-ball by the lid-hook. This method of replacement is especially useful where a corneal section has been made, but obviously it has a wider application.

In his book on the treatment of cataract, Col. Smith recommends the strabismus hook for expressing the lens in the capsulotomy operation. The operator stands behind the patient's head, makes slight pressure on the sclera above the wound with Smith's spatula held in the left hand and applies the convexity of the end of the hook to the lower part of the cornea. He then makes steady pressure upward toward the wound, following up the movement of the lens by sliding the hook up after it. Col. Smith insists that no relaxation should occur after the nucleus has escaped but that steady pressure should be maintained as the hook follows the escaping cortex up to the edges of the wound. One way for an operator to convince himself of the value of the strabismus hook for this pur-

pose is to use some other method to express the lens in a case with a good deal of cortex and to persist until no more cortex can be expelled, and *then* to try the strabismus hook. In many cases he will be gratified to find that more cortex can be expressed without dangerous pressure. The result may not be as satisfactory as it would have been if the hook had been used as indicated in the beginning; but the trial affords a good way to make comparisons, and the disadvantage will not be with the instrument which Col. Smith recommends for the purpose.

The reference to the strabismus hook suggests the way in which he uses the spatula and the hook in the intracapsular operation when vitreous loss is impending as the lens is being delivered. When vitreous presents between the lens and the upper lip of the wound, Col. Smith passes the spatula into the wound. Holding it steadily and using it to hold back vitreous and to act like an inclined plane, he uses the strabismus hook to slide the lens upon it. The extent to which the spatula has to be introduced varies according to the conditions present. If the vitreous merely presents itself in the wound, only the tip is entered. If a large amount of vitreous is lost and the lens is dislocated, it has to be passed well into the vitreous. The important part is that in any case, it acts as a plane upon which the lens is caused to glide upward. Reisinger's double hook or a spoon or a loop have usually been employed for this purpose in the past.

CONTROLLING THE LIDS

In all these manoeuvres, especially when the

patient is unruly, Col. Smith's method in controlling the lid is of the utmost usefulness. The one using the hook stands at the patient's left. The hook is passed under the upper lid, is inserted at the outer angle and slid gradually toward the center. A short grip is taken on the hook with the thumb and index fingers of the right hand. The shaft is held between these fingers as one would hold a pen. The other fingers are employed to push the brow upward; their nail surfaces are applied to the brow, and the brow is pushed up over the orbital margin by extending them. The lower lid is drawn down by the left thumb, the left hand and fingers being applied to the patient's cheek. All the connections between the eyeball and its bony framework are drawn forward, and the eye sinks toward the apex of the orbit.

The writer is aware that all those who concern themselves with the cataract operation are familiar with the literature of the subject in which the above procedures are described. They have usually been considered exclusively part and parcel of the intracapsular operation. It appeared that a useful purpose might be served to recall and briefly summarize, for those who do not do the intracapsular extraction, certain features of the Smith operation which have been proved to be of extreme value in the older method and which are, of course, but incidental phases of Col. Smith's greater contribution in giving to Ophthalmology, and thus to humanity at large, his method for the intracapsular extraction of senile cataract.

UNION CENTRAL BLDG.

Comments on and Comparison of Various Methods of Cataract Extraction in Vogue*

Andrew J. Timberman, M.D., Columbus

Editor's Note.—Although sepsis in connection with couching of the cataractous lens has been eliminated no magic power or scientific means has yet been developed to dissolve the lens floating in the vitreous or to obviate its deleterious effects; hence the necessity for operative relief in cataract. It is indeed fortunate that Lt.-Col. Smith did not allow routine teaching and experience to close his eyes to the possibilities of important improvements in the technique of cataract surgery, and his achievements should make us all keep the ideal operation always before us,—the maximum removal of lens and capsule, maximum restoration and the preservation of vision and minimum mutilation of eye tissue. To all intents and purposes the last word in cataract surgery has not been said. Homer Smith, Staniscleanu, Knapp and Barraquer have recently proposed modifications of technique. But taking everything into consideration, Dr. Timberman maintains that if he had to have a cataract removed he would want it done by the Smith method, and after all this is the acid test for any operator in determining what procedure he will use on his patients.

THE *sine qua non* of any operation for cataract extraction is the restoration and continued preservation of the function of vision. That is the first, the last, and only really important consideration to the blind: "Give us back our sight" they tell us. Not much else matters. They don't worry much about method.

Maximum vision for the maximum time is their demand. But this must constitute for us, as operators, the very minimum of our offer to them. The less we mutilate the eye; the least amount of suffering we cause; the more natural, in appearance we leave the eye; the fewer dangers we subject it to during, and following the operation; these and other considerations, *in toto*, constitute refinements of technique and procedure which lead, at last, to the ideal operation.

*Read in the Symposium on Cataract before the Eye, Ear, Nose and Throat Section of the Ohio Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4, 1921.

OTHER THAN OPERATIVE METHODS FOR TREATING CATARACT

I assume that all of us are proponents of extraction of the cataractous lens, whatever may be our disposition toward the search for its cause and prevention; or even, whatever transient and occasional efforts we may put forth to cure it. For one, I do not belittle the continued experimentation in the exhibition of certain drugs. It is possible we have not yet learned just how to rightly use them. After many years, during which there* were many doubters, the use of *chaulmoogra* oil, in that century-old disease, leprosy, seems to have been vindicated. And in this observation may come the renewed inspiration to prolong our efforts, by means of therapeutic agents. Success, if ever it be attained along this line, may not come through *succus cineraria maritima*, or the iodides, or the mercurials, but I esteem him a bold man who would say it could not be.

In this momentary digression I also wish to direct the Section's attention to an interesting fact. Dealing with cataracts by the ancient, if not now honorable, method of *couching*, never had but two valid objections to it; sepsis, and the deleterious effect of a lens floating in the vitreous. The former has, in recent years, been eliminated. I am unable to conceive that the latter ever can be done. But grant me the good luck, or magic power, or scientific means to dissolve or do away with a couched lens, and hospitals might be closed so far as my cataract patients were concerned. There would be no visible corneal scar; no sepsis, or at least less than now; no mutilation; no iritis; no glaucoma; no worry over fractionous patients, or prolonged convalescence. Grant me just this one magic power, and I will present you the ancient, and now honorable, method of couching cataracts combining simplicity, safety, economy, efficiency, and permanence.

THE STANDARD COMBINED OPERATION

But I am denied. You are denied. And thus I assume we are all proponents of extraction. And for one hundred and seventy years nothing basic has been proposed. Daviel proposed an incision through which the cataractous lens and its capsule might be removed. Many proposals have been made since his time. Many of these are important, almost vital; but not one basic. Cataract extraction means today what it meant then; and no refinement of method can, and all the refinements of method have not, changed the basic idea. Experience has, however, changed our views, and our first estimates of this or that new proposal of technique. So relatively important have many of these seemed, that undying fame has come to not a few men, through their contributions to the technique of a single operation.

What comments I shall make will not be offered as in any way unique, or even original. I

trust my comparisons, if I make any, may not be odious. Let us honestly endeavor to rid our minds of any bias, or prejudice, born of routine, or early training and teaching. We might well take a leaf out of the life history of our distinguished guest of today. Had he followed routine; or early training with eyes shut to the teaching of experience, he might not have been our guest; he certainly would not have been so distinguished. And let us always keep the ideal operation in mind; the maximum removal of lens and capsule, maximum restoration and preservation of vision, and minimum mutilation of eye tissue.

I shall comment but briefly on the standard combined operation—the one generally practiced and taught. You know as well as I the successes and failures attending its constant use. So often realizing all that is claimed for it; its comparative freedom from accidents at the time of operation; the brilliancy of its first result—all these considerations, and more, combine to bring to it a large measure of merited confidence and praise. Not less potential, however, in its sustaining influence with the average operator, is that large body of talented men who are its most fervid proponents. And this is a very present help in time of need. Which of us would undervalue the consolation which would come to us with the thought that our surgeon did for us just what the best surgeons did for their patients? And yet who among us does not dread the week following that operation? Who does not fear the frequent iritis? Who does not, at the time of the first dressing, anxiously note whether or not retained cortical matter is the most prominent feature in the pupillary area? Who has not watched the steady march of the pupil upward ending in complete obliteration, the stretched and atrophied iridic membrane being the answer to the blasted hopes of patient and surgeon alike? And then if all does eventuate beautifully at the time of extraction, there is the capsule which like a cloud on a sunshiny day will cast its shadow. And it seldom grows less. After-cataract is after-cataract, and like its forerunner, demands, sooner or later, operative measures; and we know its dangers and uncertainties also.

All of the ocular fatalities due to a discission have not been reported. We run again the gamut of sepsis, iritis, iridocyclitis, and glaucoma. Somehow down deep in our hearts we feel something is wrong. Somebody has intimated that cortical substance left *in situ* sets up irritative and even inflammatory reactions due to chemical changes. If we had only gotten it all out? And this patient is a particularly influential citizen too! If it had happened in the case of the ward bum who got such a fine result only two or three weeks ago, it might not have caused quite so much concern. We knew it might happen, and had waited a year, maybe two or three years for the cataract to ripen. In the meantime our patient had fretted. His business needed him. His fam-

ily noted increasing physical and mental debility as the gloom settled so slowly around him. The only antidote to our fears, and the only compensation for the patient's perplexity, was that he would have a better chance to escape many distressing features if the operation were done when the cataract was ripe.

I trust I have not overdrawn the picture. It is from my own experience. Have you not had the same? Many of my confreres have related theirs to me. That you are intensely interested in a new evangel that promises some improvement is evident. From New England on the east to California on the west: from Minnesota on the north to Florida on the south you have come, not to teach, but to be taught. But we do not decry the standard orthodox method of operating on the cataractous lens. It is an honorable method. But, with your permission, "So are they all honorable—all honorable methods."

PRELIMINARY CAPSULOTOMY

A few years ago Dr. Homer Smith, of New York State, made, in my humble opinion, a real contribution to our operative technique for a certain limited number of cases. We have all had young people twenty-eight to thirty-five years of age who developed cataract, for all the world like those in people thirty or forty years older. Such a case, a schoolteacher, presented himself to me last May. He had barely managed to finish his school year, was wanted for another year, and it was his means of livelihood. Manifestly the tough ligament might preclude a successful intracapsular operation. The combined method, from past experience, offered no alluring prospect. Rather I had visions of him spending the summer in the hospital—for him an impossibility. I sent him to the operating room at 4:30 p. m. when I did the preliminary capsulotomy as recommended by Homer Smith. The next morning I removed the lens, on the 10th day he went home; about Sept. 1 he was fitted with glasses getting 20/20 vision, and returned to his school, which he has had no difficulty in directing during the past year.

SUCTION AND OTHER METHODS

Of the various suction methods whether with the Barraquer or other instruments I have had no experience. I see no reason why, in selected cases, suction could not be used to advantage. I think I see, in nervous excitable patients, very good reasons to doubt its availability. I may be wrong.

I have tried rupturing the ligament by grasping the anterior capsule with forceps, as recommended by Staniscleanu, Knapp and others. I almost died from fright as I saw it done once in Knapp's clinic. But the patient was very tractable, nothing happened, and I came home and went bravely at it. It is an interesting fact, to me, that the first few cases turned out beautifully. But about the fourth or fifth patient, on

whom I assayed to repeat my success, suddenly took it into his ivory head to forcibly rotate his eyes upward at the same time tightly squeezing his lids together. I held on to that lens, however, involuntarily as I now think, and got it; also a big loss of vitreous, considerable loss of vision, and the scare of my life. The biggest thing I got was a realization of how helpless I was at a certain critical stage of the operation, and I hesitate to attempt it again. I have neither my friend Vail's instrument, nor the Barraquer instrument. If I understand them and the method of using them, I am thinking the same objection might hold good. However, I am willing to be shown the contrary.

INTRA-CAPSULAR EXTRACTION

Of the method as proposed, taught, and practiced by our distinguished guest, Col. Henry Smith, I have had a considerable experience. He himself has told you of it far better than I can. Others on the program have dilated upon certain special features of it. What can I add? Ten years ago for a period of over two months I had the great privilege of sharing, with Dr. King, his boundless hospitality, the while studying and practicing his method upon 800 cases. For ten years I have been practicing his method. Does my experience now prompt me to confirm his estimate of his own method, or does it lead me to modify or detract therefrom. I will speak in no equivocal terms. Had I a cataract myself to be removed I would want it done by his method. For ten years I have watched these cases and compared them with others done by the old method. I have learned to dread retained capsule and cortex, and I am thinking more eyes are so lost than by loss of vitreous. Indeed my own experience is that loss of vitreous seldom does cause the loss of an eye either because of infection or later degenerative changes in the fundus.

Col. Smith does not claim it can be so easily done as extraction with capsulotomy. I think he will maintain that any one who can become proficient in one can become so in the other. And to such an operator the advantages of complete removal of all cortex and capsule is so self-evident that nothing should prevent him from becoming master of intracapsular technique.

CITIZENS BANK BLDG.

NEW AND NON-OFFICIAL REMEDIES

Suprarenalin Solution.—One thousand parts contain suprarenalin sulphite equivalent to one part suprarenalin in physiological solution of sodium chlorid without addition of other preservatives.—Armour & Co., Chicago.

Treatment After Cataract Operations*

John W. Millette, M.D., Dayton

Editor's Note.—Tradition and conservatism so bind and hedge in the profession that in the presence of a great responsibility we are likely to be timid. Feeling that the rigid requirements demanded of cataract patients after operation were nothing short of unendurable and unnecessary, Dr. Millette began allowing more and more freedom and finally was able to develop a post-operative regimen which has added very materially to the comfort of patients and has eliminated many complications in the after-care. It is to be hoped that other operators will show similar courage in relieving their patients and in making recovery more comfortable.

THE TREATMENT after any operation is of paramount importance, and the biggest part of the problem is to make conditions most favorable for Mother Nature to do her work with the least effort and in the shortest time. My belief is, that this is done most perfectly when the ordinary routine of life is least disturbed.

It is wise to disturb the psychic, nervous, and physical routine of patients just as little as possible. Their sensibilities, feelings, manner and habits of thought should be kept going along in their accustomed ways. Their sleeping and eating, goings and comings, should be altered just as little as is consistent with the nature and care of the lesion.

There will probably be a general acceptance of this principle, but a very wide divergence as to its application.

THE PROBLEM OF POSITION

Through several years of quite close observation of the healing process following cataract operations, I was impressed with the universal complaint concerning the back; with the rather frequent mental disturbances; with the suffering at times from acute retention of urine, and more or less renal disturbance. When it fell to my lot to take the responsibility for these patients, I felt constrained to find relief, if possible, from these conditions.

Tradition and conservatism so bind and hedge us in that in the presence of a great responsibility we are likely to be timid, but what seemed absolutely necessary here was relief from at times almost intolerable suffering. To lie on one's back for twenty-four or forty-eight hours or longer is a task to tax the endurance of much stronger and more patient persons than are a great proportion of cataract patients. I wondered if this requirement could not be less rigidly enforced and no harm be done.

Acting in accord with the belief already expressed and this hope, greater freedom of action was granted. The patient's body was turned toward the side of the unoperated eye, when he complained of back pain or discomfort. Later, the head, which previously had been placed between

sand bags to help retain it in position, was shifted. A considerable measure of relief was obtained and gradually more and more freedom was given with less suffering until at present the custom is not to inhibit the postural freedom of patients in any marked degree, except during the first twenty-four hours.

ROUTINE POST-OPERATIVE TREATMENT

Generally speaking the treatment is routine and symptomatic. The routine procedure is as follows:

Immediately after the operation the eye is closed naturally and gently. Vaseline is placed over the lids of both eyes and a half round pad is placed over each eye. Over this is placed a full round pad of the same structure. These are fastened on with adhesive strips. Over this, over the operated eye, Dr. Fox's aluminum shield is placed and secured with adhesive strips. Over both eyes next is placed another pad and a mask. I am convinced that most of this is quite unnecessary but so far have not had the courage to break away from custom.

Patients are instructed to lie perfectly quiet, but if they complain of their back, they are turned to the side opposite the operated eye.

On the morning following the operation the bandages are removed, the eye opened and examined. Usually the anterior chamber has formed and the wound is closed. The eye is again closed after gently bathing the lids with a boracic acid solution. The half round pad and the full round pad are placed over the operated eye. The patient is given the use of the unoperated eye.

On a great many of these old people, the effect of keeping the eyes bandaged seems to be to bewilder and confuse the mind, inducing a feeling of fear and a desire to protect themselves from impending danger. A form of dementia, more or less violent, may follow which may or may not cause harm to the eye, but certainly is very distressing to all concerned. Since adopting the mentioned procedure we have had no post-operative dementia. During this first day after the operation patients are given a back-rest and permitted to sit up in bed.

On the second morning the eye is dressed again and a pad hung loosely over the eye, giving perfect freedom for the lids. The patients are per-

*Read in the Symposium on Cataract before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4, 1921.

mitted to sit up in their chairs. From this on almost absolute freedom of action is given. The eye is kept shaded since the light is borne rather poorly by the sensitive retina.

On the third or fourth day dark glasses and a brow shade are prescribed. Patients are kept in a somewhat darkened room for several days. Each night a pad is placed over the eye and over this a metal shield or mask to protect the eye from movements during sleep. Usually at the end of a week or ten days the eye is ready for a preliminary test of vision. Glasses are fitted after two or three weeks and a change of lenses may be necessary after several months.

RESULTS

Under this routine, suffering in the back, post-operative insanity, as well as bladder and kidney troubles have been practically eliminated. There have been fewer inflammatory processes and several probable infections have been aborted. Perhaps the most pronounced result obtained by this more or less open treatment, has been the relief from acute retention of urine and absolute freedom from kidney lesions.

One of the most severe cases of acute retention I have seen and one that influenced me most in this form of after-treatment, occurred four years ago:—Mr. S. W. D., eighty-one years of age, was operated on about 8:30 a. m., in his bed at his home. A trained nurse was in constant attendance. In the early part of the afternoon he complained of some distress in the region of the bladder. In the evening his family physician was called and relieved him with a catheter. He had an uncomfortable night and when I called the next morning about eight o'clock, I found him standing beside the bed with a urinal doing his best to empty his bladder. I had him lie down that I might examine the eye, expecting to find everything gone wrong. On the contrary the wound was closed, no redness, and all was looking well. He was given the use of the other eye and granted permission to sit in a chair or walk about the room. His physician looked after the bladder trouble which continued for several weeks. The eye became slightly inflamed and was treated with atropine for a week or more, but went on to recovery with 20/15 distance vision and ability to read Jaeger one with ease. The patient lived nearly four years after this operation and retained his vision to the end.

HANDLING COMPLICATIONS

This form of treatment, or lack of treatment, gives an excellent opportunity to do whatever is possible to avoid or abort an infection. To bandage the eye and keep it bandaged makes a very good incubator, since the three essentials of an incubator are all supplied, *namely*, warmth, moisture and darkness.

Under symptomatic treatment are included all complications which may occur, such as prolapse

of vitreous or iris, delayed healing of the wound, and any inflammatory processes such as iritis, irido-cyclitis, keratitis, conjunctivitis, and so forth. Inflammations of the cornea, iris, and uveal tract are given the ordinary treatment with atropine and dionin.

Hernia of the vitreous or iris, I let alone, and get the patient on his feet. Presuming that the incision is made upwards, I am convinced that the urge from within the globe is not so great on the wound when the patient is in the upright position as in the prone. There being less strain or tension on the wound, it heals more rapidly. The hernias usually will reduce themselves without manipulation.

CONCLUSION

Briefly then: believing that the best treatment is that which interferes least with the patients' psychic and physical activities, I have attempted to relieve them, wherever, whenever, and as soon as possible of anything which might disturb the ordinary functions of mind and body, and yet keep them well within the bounds of safety so far as the healing of the wound is concerned.

58 CAMBRIDGE AVE.

INTRODUCTORY REMARKS OF CHAIRMAN

DR. DERRICK T. VAIL, Cincinnati, chairman:—I presume you expected from me this morning some suitable remarks by way of introduction of our distinguished guest on this occasion. Six months ago I sent to you, and to the profession at large, a descriptive article in which I endeavored to set forth something of the work and character of the man we are honored to have with us today, and since I covered pretty much all I would say in that article I have prepared no formal Chairman's address.

I only wish to state that until quite recently the operation for cataract embraced certain principles which were well tried and found to be thoroughly satisfactory. We were taught for many years the necessity of using a cystitome in the operation for cataract for the purpose of opening the anterior capsule, to allow its contents to be delivered, but leaving the entire capsule behind. Many efforts were made to complete the operation in one seance so that no further operation would be necessary. Some of the methods were ingenious and very useful, but the principal idea was to slit the capsule with the cystitome making T-shaped or V-shaped incisions through the axis of vision, or peripheral incisions to allow the opening to be behind the iris, or in some way that would safeguard the eye against after complications. These methods are still largely in vogue and very excellent they have proved to be, as I can testify from my own experience and the experience of many others.

But as you know from my writings, I have long taught that this method, excellent as it is, has one fault which is somewhat objectionable, an inherent fault that I would again bring to the attention of the profession. In order to follow this technique with the greatest safety to the

eye it is necessary to wait until the cataract becomes somewhat advanced in the ripening process; better in fact to wait until the eye becomes blind. Many taught that we should wait until the patient is no longer able to count fingers before undertaking the cystitome operation. This entails long years of waiting in many cases and much anxiety, so that I have felt as many others have felt that that method of procedure, good as it is, does not meet the real requirements in this latter day of progress in matters surgical. It is incumbent upon us as specialists in this line of work to resort to some method that will enable the operation to be done with reasonable safety before the patient is reduced to blindness.

It was this thought and desire which led me to undertake the trip to far off India to study the methods of the leader and master in that line of work. I went there not to be convinced that the operation which I was doing was not satisfactory, but I went simply as an observer to see how Colonel Smith did the work and to see for myself whether indeed it was true that the eye could be operated upon with success before the cataract was ripened. It was not long until I was fully convinced that in that country at least the work was being done, and had been done for years with marvelous success and wonderful results, and I became convinced that the newer principles were better than the older, and that we were on the threshold of a new era.

Now without the work of Colonel Smith in far off India, with his wonderful opportunities, his determined personality and his great skill, it would have been impossible for us to have acquired the knowledge that immature cataracts can be safely removed and our position today would be practically where it was many years ago. Of course there are many still in doubt, and many to be convinced of the utility of this operation, but the fact remains that there has been a great impression created by the work of Colonel Smith. He has originated and taught a method of operation on unripe cataract which has met in his hands all the requirements of the case, and so we look upon him as a pioneer. We now hope to have better results, higher ideals and a solving of the problem if not in the present, at least in the future through his individual efforts.

The idea of an intra-capsular operation for cataract has taken hold of the profession and our belief is that in the future it will be better appreciated, and approached with better confidence so that ultimately the older method will be superseded by the newer. As to the operation which Colonel Smith has to show us, I will say that its principles are sound. I think we are all united in the belief that, as an abstract proposition, it is far better to remove the capsule on the lens rather than to leave it within the eye. The capsule on a cataractous lens has some function, but after it is slit and allowed to remain within the eye it becomes a functionless membrane, and as such becomes to a certain extent a form of "physiological foreign body" if I may use the term and I look upon it as such. I think when these newer principles are accepted, and we are trained in the method of carrying them out the old operation will be largely relegated to antiquity.

It only remains for me to present to you the master and leader in this line of work, a man whom we all know from his writings, and one whose personality has been felt for many years. It gives me great pleasure, and it makes me happy beyond expression, to be able to present to you Lt.-Col. Smith of India.

DISCUSSION OF CATARACT SYMPOSIUM

DR. J. W. WRIGHT, Columbus:—My experience in the removal of the cataractous lens within its capsule is that of a shadow as compared with that of Col. Smith's. My early procedures in the extraction of the cataractous lens consisted of what was known as the Flap Operation, which required an incision of one-half of the corneal circumference, with an equally extensive flap, that to my notion too frequently resulted in imperfect coaptation of the lips of the wound, with or without prolapse of the iris, resulting in the union of the wound by the process of inflammatory granulation, with more or less corneal opacity and usually a drawn up pupil. To avoid such discouraging conditions, I conceived an incision entirely within the cornea, and so situated that there would not be the tendency in the lips of the wound to gape or overlap, as has been described in my publications in various instances. My idea of this incision was previous to any thought on my part of the intracapsular operation, although I consider it as my first step in that procedure.

My conception for the removal of the cataractous lens within its capsule was induced by accidental circumstances. Five or six years after I began cataract operations, in making one on an aged gentleman of eighty, immediately after completion of the corneal section the patient fainted, and during the syncope I was surprised to see the water gushing from his eye and the lens lying on his cheek. I was horrified and imagined that the eye was lost. After the patient had sufficiently recovered I examined the eye and was surprised to find it in splendid condition, the wound being neatly coapted, the iris in position, the pupil somewhat enlarged but symmetrical in contour and the anterior chamber free of debris. I dressed the eye in the usual manner and an uneventful recovery followed, with no pronounced inflammatory reaction. The only thought I gave this transaction was the splendid result obtained, and how fortunately I had escaped a most serious disaster.

Two or three years after this incident I had a case in an aged lady. I had made the corneal incision in the manner I had recently adopted, when I attempted to make an iridectomy. In pressing down upon the upper section of the cornea, immediately above the incision, with the forceps in order to grasp the iris, the lens presented itself in the opening and was half through the pupillary space, when with but very slight pressure it was readily removed in its capsule. The result, as in the former case, was everything that could be desired.

Considering these splendid results and the absence of the usual inflammatory action following cataract operations in general, doubtless because of the absence of cortical and capsular debris, I was naturally impressed with the experience which these two cases afforded me, when I conceived a method by which I found it possible to detach the lens from its moorings, the annular ligament, and remove it within its capsule, since which time I have made the effort to do so in most all of my cataract operations, usually with success.

My theory then was, and is confirmed by experience, that it ordinarily requires very little pressure on the upper segment of the cornea, as I make the incision, to cause detachment of the lens from the annular ligament at its upper portion, and when once started, the lens "peels" itself out, as it were, from its attachment by very slight pressure from both above and below.

There are some matters of consequence in the

operation of cataract that should be carefully considered. While the loss of vitreous in the operation is not regarded as a serious occurrence by many operators, I have always considered it in an unfavorable light, notwithstanding I have had some excellent recoveries after a considerable loss of this humor. Even in the loss of a small amount I have, on several occasions, had serious trouble; however careful I may have been in snipping off every bead of vitreous, and seeing that the wound was properly coapted, at the first dressing I have found the wound gaping and intruded with vitreous. This condition occurred more frequently in my early days of operating, before I made the corneal incision as I did later.

Another consequence in the loss of vitreous is that the retina loses its support and occasionally becomes detached. This has occurred in a few of my own cases, where otherwise the operation had been a complete success. I have observed the same in other operators' cases, where the cause of the visual defect had not been diagnosed.

There are doubtless cases where the capsule on the posterior surface of the lens becomes adhered to the hyaloid membrane at its fossa, when the removal of the lens in its capsule would invariably cause a rupture of the hyaloid with more or less loss of vitreous. For this reason the intracapsular method is not always free of untoward consequences; at the same time the capsulotomy operation could have no advantage over the intra-capsular, inasmuch as the remaining capsule is adhered at this point and seriously interferes with the visual acuity. There are no means of determining before an operation whether such attachment exists.

There are some facts relative to the lens as well as to operative procedures that should be carefully observed when we regard it as impracticable to attempt to remove the lens within its capsule. One thing is that the cataractous lens, however old and hard, invariably has some clear cortical substance, which being invisible is very often allowed to remain in the eye, which, with the remnants of the capsule is sure to cause more or less inflammatory reaction and occasionally the loss of the eye. Another matter. My observation also has been that the internal surface of the cornea, its endothelium, should never be touched by an instrument, as is often done by the scoop in removing debris from the anterior chamber; this membrane is very sensitive, and the least abrasion of it is liable to cause a lasting opacity.

In the older methods of operating pressure is usually made on the surface of the cornea in delivering the lens. This procedure often causes that condition known as buckling or kinking, which occasionally leaves slight horizontal streaks in the cornea, with a consequent defect in the visual acuity. This is entirely avoided when the pressure is made above the incision.

An eye becomes cataractous as a result of disease or a traumatism. This fact must not be lost sight of when an operation is suggested for the restoration of vision, for the reason of complications which may, to a greater or less extent, modify the visual acuity desired or anticipated.

My first operations for cataract were made in the homes of my patients, which was, at that time, a necessity, especially in my location, where there were no hospitals in convenient proximity; however I am quite positive that many, especially the aged, of whom most all are, do much better in a well regulated home than in a hospital, where they become fretful from the unusual surround-

ings, and worry to return to their homes long before they should be allowed to do so.

While the successful operation of cataract is the most brilliant achievement in the domain of surgery, it is also the most delicate. All of us have not the *tactus eruditus* to make this critical operation successfully, and should not make the attempt. One of the greatest regrets of my life is that I am compelled to discontinue this fascinating operation.

DR. C. F. CLARK, Columbus:—I am one of those who for several weeks lived under the spell of Colonel Smith's charming hospitality in his home in the plains of northwestern India, and I have enjoyed the opportunity of operating under his guidance on a large number of Indian patients in his Jullunder clinic. I am the proud possessor of a bottle full of cataractous lenses which I successfully removed after he had taught me his method of extracting the lens in the capsule. The records and results of these operations he kindly sent to me as proof of the later condition of my patients, and, after working with him and seeing him operate on hundreds of cases, I can testify, not only to his wonderful skill, but to the admirable results which he obtained.

That his work is unique and that he has made a great contribution to ophthalmic surgery, all will agree who have been so fortunate as to work with him and to see the hundreds of patients who come to him blind and return to their homes in every section of Northern India with their sight restored.

That in India and in Col. Smith's hands extraction in the capsule has proved a success is, I believe, conceded by all. The question for our consideration, at this time, is to what degree is it adapted to our needs and how does it, as employed in this country, in the hands of the average operator who does successful work, compare in its results with other methods of operating? What are its limitations?

This method of operating has been under consideration in the profession for some eighteen years and, as a number of men from Ohio have worked in Col. Smith's clinic and others have in various degrees adopted this plan, many cases have been operated by this method and we should by this time be able to speak with some assurance as to its merit, as practiced in this country.

Partisanship in the advocacy of a special method, personal prejudices, spectacular effects and all other considerations are out of place in such a discussion as this and we should get down to the cold facts and consider them without fear or favor. Given the character of the patients we have to deal with, the degree of our skill as operators, the extent of our individual experience and the conditions under which we do our work, to what degree and under what condition of the individual case are we justified in adopting this extra-hazardous procedure? That this operation must and should take an important place in ophthalmic surgery is, I believe, generally conceded. That it is an extra-hazardous procedure adaptable under our conditions only to selected cases is, I think the conviction of a large proportion of conservative operators.

In a large clinical service, in the hands of a skillful and resourceful operator of large experience I can readily understand that a considerable number of cases would present themselves which would prove to be well adapted to this procedure especially if the admirable suggestion of our chairman, Dr. Vail, be adopted and the operator hold himself in readiness after

a tentative effort has proved the case to be a difficult one, to change his tactics and resort to the usual method with division of the capsule. What we are seeking is not the vindication of any theory as to a particular operative procedure but the obtaining for our patients the best possible visual results with the least possible risk to the integrity of the eye; and those of us who enjoyed the great privilege of working with Col. Smith in his Indian clinic can testify that he was no slave to his own peculiar method of operating but that with almost wizard-like skill or by an apparently intuitive process, with his mind concentrated on his work, his quick resourcefulness led him at every stage of his operation to adopt whatever means would best serve his purpose and yield a good result to his patient.

The place of this operation as one of the valuable resources of the ophthalmic surgeon is well established but to advocate it as the routine operation of choice for the average operator under the conditions prevailing in this country seems to me absurd.

Occasional or even a fair number of brilliant results do not in my judgment justify the general adoption of a procedure in which the operator must deliberately substitute an imminent risk of serious injury to the integrity of the eye, for a slower method of obtaining equally good results by what is granted to be a safer procedure; and the acknowledged, plus the unrecognized, or at least unpublished, ultimate failures seen by fellow practitioners in regions in which large numbers of these operations have been performed, are, when they occur, such *disastrous* failures as to make one wonder at the temerity and blythe cheerfulness with which some men can take unnecessary risks with other people's eyes.

There are undoubtedly many cases in which such a risk to the patient is not only justifiable but almost a necessity. These are in my judgment selected cases, but one can not refrain from giving expression to his indignation when he sees this wonderful and beneficent operation made an instrument of base commercialism by some of its advocates.

With my knowledge of Col. Smith's high personal character, his innate, vigorous honesty and deep scorn of anything approaching commercialism in the practice of the medical profession, I know that he will learn with deep regret that among the advocates of his admirable operation, there are those, who are availing themselves of the interest it has excited and have allowed the spirit of personal exploitation and the desire for immediate, monetary return to dominate them in dealing with their patients.

There have even been instances in which the choice between the old operation and the new was left to the patient but with a considerable difference in the fee in favor of the Smith Indian operation. It does not require the services of a psychologist to fathom the depths of the process of reasoning which is involved in such a transaction.

We, as ophthalmic surgeons, cannot shift the responsibility of decisions as to what is best for our patients from our own shoulders. We are the trustees of their future welfare and such conscienceless commercialism as this is not only damnable but beneath the contempt of honorable gentlemen.

The statistics of the ultimate results of the Smith Indian operation as practiced in this country have not been collected with the care that the importance of the subject would justify. If the question is to be veighed, as its merits deserve, we would do well to review the methods of

Dr. Herman Knapp, of New York, in his careful studies of the relative merits of various operative procedures during the interesting period when simple extraction of cataract was under discussion.

The operation, as I have already stated, has been before the profession for some eighteen years and a number of American operators have employed it for more than ten years. Would it not be worth while to obtain some accurate statistics as to its safety and merit, judged by their results, as compared with other methods? The results by some of its more enthusiastic advocates show rather a large proportion of failures as compared with the usual operation with division of the capsule, and it is fair to presume that some cases of ultimate failure have failed to be included in these statistics. It is important that we should know what are its limitations and I would suggest that, as the Soldiers' Home in Dayton has been one of the few institutions in which it has been employed for a series of years, the members of our section from that city in co-operation with the surgeon in charge at the home might, from observations within and without the institution, be able to collect for our instruction a series of cases with their ultimate results, including an equal number operated by the old method and by the new.

If it meets with the approval of those present, I would be glad to make a motion that our chairman appoint a committee to make a careful study of these results and report to this section at next year's meeting.

The record of the final results in the cases operated by our friend, the late Dr. Green before and after his trip to India would be most interesting, as he was an enthusiastic advocate of the Smith-Indian operation.

In conclusion, what we want to know is, can the average American surgeon of reasonable skill, who has been doing the cataract operation by the old method and getting good results, obtain better results by this method? If he can, and attains the skill that Colonel Smith has attained, he will be justified in employing this operation in proper cases. The question is: is he justified in experimenting on his patients before he has equipped himself and had some training in this method? I believe that, if we could collect throughout the length and breadth of this land the unfavorable and disastrous results following at the hands of men who have not taken the pains to equip themselves, we would find that there are large numbers of blind who would not be in that condition were it not for the attempts made to substitute this method for the operation of extraction in the capsule. This is not at all a criticism of the operation when properly performed in carefully selected cases, but it is a criticism of those who attempt such a procedure without proper training and judgment. It is alluring and it tempts a great many operators who are not willing to go to the trouble or take the pains to equip themselves to do this operation. I hate to say this, it sounds reactionary, but I am not a reactionary in the least. I am thoroughly in sympathy with anything that is up-to-date. Some years ago I tried Dr. Hulén's procedure by suction and found at my first attempt a tendency to dislocation of the lens before it was securely attached to the instrument, and so gave it up. The instrument was not sufficiently delicate but the operation seems to give promise of good results. I am merely presenting a plea for conservatism, and the assurance that you have taken the preliminary steps before you

attempt the final steps in so hazardous an operative procedure.

I put the greater part of my discussion in writing because I felt that it was extremely important. It is not a pleasant duty to be obliged to sound a note of warning on this subject in the presence of Colonel Smith, but we all know there has been an over-degree of enthusiasm on the part of many and I am simply asking that when the profession takes hold of this large subject they observe the conditions and study the rules of the game before they attempt to play. (Motion submitted).

Chairman Vail: Dr. Clark's motion will be taken into consideration, and a report submitted.

DR. HORACE BONNER, Dayton:—I knew there would be such an extensive discussion that I trusted to get some inspiration from it myself, and did not come prepared with a discussion written out. There are some few things I would like to say. In the first place we are not all congenitally endowed in the same way. We are not endowed with the same intellect or with the same manual dexterity, and these things must be taken into consideration. The man who has the courage to study and find out his own limitations, and then has the courage to act to the extent of those limitations in an emergency, and in case of an emergency to stay out if he is not qualified, is the real man, and the man who is liable to be a good specialist; because specialists, gentlemen, if they do not watch themselves, are dangerous men. Now as Col. Smith himself has just stated to you, this operation is a difficult operation. Those of you who have tried it know that is a fact. I have done the operation and I know it is a fact. The manual dexterity, and the tactile knowledge you must get from doing the operation are particularly important, and that is the part that will qualify. Even the man who has congenital endowments must have a good deal of experience before he does it as he should. The man who does three or four cataracts in a year, or less, I doubt if he is qualified to do a cataract operation at all. The man who does not have a cataract operation at least once a week, or oftener is not qualified to test the Smith operation. I made this statement before this section years ago when this matter was first brought up for discussion. I think Dr. Green brought it up, and I made it at that time, and I still insist it is true. Those who have not had the experience, and have no chance to get the experience, would better stay with the old operation, and do the best they can with it, it is easier and safer. I know a little more about Dr. Millette's paper than the others, and will say a few words about it. I do not know that there is any point in it which I would criticize particularly, unless it is the one which is directly contradictory to Col. Smith's suggestion of making an early inspection. I think possibly that is better left to a little bit later, which would correspond with the statement made in the beginning of his paper, that it was best in such conditions to disturb nature as little as possible.

As to the care of the patients afterwards, allowing them all the privileges possible strikes me very forcibly. I think those who have done cataract operations, and have had any special experience, have had at times unruly patients who would get up and do all sorts of things, and yet get well splendidly, while those we take the very best care of do not. I think the matter of allowing them a good deal of liberty is a very important one, particularly with elderly people. You take an elderly man, one who comes in from

the country, put him in the hospital, put him to bed and tie his eyes up, and if he does not get daffy it will be unusual. Of course a large proportion of them do and there is trouble. It is a great regret to me that my old friend Dr. Green could not be here to welcome Col. Smith. It would have been the greatest treat of his life if he could have been.

DR. VICTOR RAY, Cincinnati:—For the past fifteen years, we have heard of Col. Smith, and his operation. Those who were privileged to work under his instruction came back full of enthusiasm for the intracapsular operation. To be privileged today to see and hear the author of an epoch-making operation, is an occasion that will be recalled for many a day.

The intracapsular operation undoubtedly meets the rather unusual conditions of the far east, particularly those of India, and I fully appreciate the fact that the capsular operation would in no sense be adequate.

The frequency of cataract in this country is, as we know, a great deal less than in India for that matter the entire Orient, due to better hygiene, better nutritional conditions, absence of intense heat and light, the early care and correction of optical defects, all of which contribute to healthier eyes and undoubtedly influence favorably the development of cataract. For these reasons the average oculist does not have the opportunity to see but a comparatively few cataract cases.

In the last report of the Knapp Memorial Hospital, of New York City, out of 11,000 new eye cases admitted during the previous year, there were but 103 operations for senile cataract representing about 9 cataracts in every thousand admitted. This ratio I believe to be representative, although it may be exceeded in the practice of few eye surgeons who have become known as cataract operators.

The cataract operation is one that stands out by itself distinct from other surgical procedures. It requires a special skill, one might say genius, to do this apparently simple operation properly.

It does not fall to the lot of all men to have these qualifications. Aside from being temperamentally suited it is necessary to have assisted with, to have actually had ones hands in the work with many cases so as to meet the many complications that are likely to arise.

Col. Robert Henry Elliot in his recently published work on "Tropical Ophthalmology" gives the following advice, that in his experience, and he has tried both methods freely, the capsule laceration is the easier and safer.

Unfortunately most operators range themselves for or against the intracapsular operation. There are many cases where this operation is more desirable than the capsular operation, and one should be prepared to do either.

The fear that most of us have is the loss of vitreous. This accident is frequently minimized by many, a small loss not being considered of much consequence. It is not the danger of later changes that may be brought about by any loss of vitreous, such as detachment, secondary glaucoma, or choroidal exudates that we dread, but the difficulty, when we have had a loss of vitreous to properly replace the iris, or portion of zonula, which may and often does become incarcerated, resulting in a chronic iritis, or iridocyclitis,—or at best in a chronically irritable eye, in which the vision may still be fair.

The capsular operation has been accused of faults which it does not have. It is not necessary that the cataract mature for

extraction. When the vision is reduced so that there is no practical use of the eye, we will say about 15/200 by the removal of a large piece of the anterior capsule, a piece at least six millimeters in diameter, a most satisfactory result may be obtained, by carefully milking out the soft cortex, after the nucleus has been delivered; what remains will as a rule be absorbed in a few weeks. Even should a secondary operation be necessary, this is comparatively of slight risk with the use of the knife needle, making the incision well in the sclero-corneal border. The results are usually excellent, as the capsule is usually of the spider-webb variety.

I feel in regard to cataract operations, that it is a question of the individual. It requires special training, training over a period of years, and the realization of what is at stake when we take a cataract out. It is not like the amputation of a finger or a leg. Everything depends on technique. I agree with Dr. King that there is much to be gained by taking lessons from Col. Smith's technique, his dexterity in the use of the knife. It is the clean cut incision that counts. It is the clean iridectomy and the replacement of the iris that counts. My personal experience as compared to Col. Smith is of course comparatively small, but I fortunately have had the opportunity for many years to assist Dr. Sattler, who I think is one of the most capable eye surgeons we have in this part of the country. It is the many complications, and the many difficulties, however, which may arise, which has given me the full realization of what this operation means. For those who have had the training and who are really qualified to undertake the operation, it is not necessary to go to India to Dr. Smith. The opportunities are comparatively few in this country. Few men have more than 25, 30 or 40 cataract operations a year. Even those who have hospital positions do not have a great number. At the General Hospital in Cincinnati I do not think we would average 50 cataracts a year. Now you take a man who does 15 or 25 cataracts a year, is he justified to undertake such an operation? In this country we are able to follow our cases, we do not lose sight of them, they do not disappear into some other territory. These are about the chief points I have to discuss.

DR. L. WEBSTER FOX, Philadelphia:—It was with a great deal of pleasure that Dr. Posey and I accepted an invitation from your Chairman to attend this symposium. This is, undoubtedly, one of the greatest treats of our lives. Dr. Posey and I have had a great deal to do with the teaching and trying to lead young men into the simpler ways of performing various cataract operations. When Col. Smith's operation was first introduced to American ophthalmologists by Dr. Green, he was invited to visit Philadelphia, and we gave him a hearty welcome, because we were willing and anxious to accept the best for our young ophthalmic surgeons. The young men coming to Philadelphia to study, come with the feeling that we are to give them the best that is in us, and it is up to us to find out which and what is the best, especially in the manner of cataract extractions. So when Dr. Green came to us we had a seance. It was our desire to find out the possibilities of the operation. Later on I went to Dayton and was received by Drs. Green and Millette, who were then carrying out the details of this operation according to Col. Smith's method. We felt that the operation was one that required a great deal of preliminary training. You cannot expect the delicate hand that is necessary, to deliver a lens

when performing the Smith operation, until the individual has been trained to do operations galore on the pig's eye, which is the best substitute we have for the human. After the skill of the young operator has been tested, the privilege of operating on the patient, under your supervision, may be permitted.

I am sure we are all impressed with the ease of the operation as performed by Col. Smith. We, of the opposition, feel as if we were on the sea shore trying to battle against the heavy waves that are over-powering us. I believe, we all agree that by carefully watching the Master operate we may be able to get his technique. That is the whole thing in the nut-shell. Would a beginner be justified in performing Smith's operation, with its refined difficulties, without becoming proficient in the old style operation. I would say no. My experience has been and that of the young men with me, that the old fashioned operation is safer in the hands of the novice than the Smith operation. We need not fear the complications of iritis nor secondary cataract, as mentioned by some in the discussion. In our clinic the method of operation for secondary cataract is, as follows; dispense with needles, make an incision with a broad knife as outlined by De Wecker, and afterwards touch the wound with trichloroacetic acid. This accounts, in my judgment, for the very few infections we have encountered.

We came to pay tribute to Col. Smith and to assure him that a hearty welcome awaits him in Philadelphia.

DR. WM. A. FISHER, Chicago:—Col. Smith has given us a fine paper and ophthalmic surgeons can profit by his suggestions. His technique can be applied with advantage by operators whether they operate in or out of capsule. He is to be congratulated upon what he has done, and especially for his keen interest in new technique. He recognizes the importance of new technique when he speaks well of the suction grasp of Barraquer.

It seems to me that Clark is unnecessarily alarmed. When men like Posey, Fox and others will not accept this operation, I do not see why the younger men can be expected to do it. Years ago, in Chicago, I talked to Fox until I was hoarse, but did not make an impression. Yesterday I talked until I was ashamed of myself, and I see now he is still unconvinced. I would like to introduce to Fox, since he has spoken about the pig's eye, a six weeks old kitten's eye. I am sincere about the kitten proposition and believe it far superior to that of the pig for obtaining technique.

Some of the speakers have said that we should not take up the new operation. I do not see any great difference in the operation, but much depends upon the man who operates. Smith can do the old operation better than we can, and he can do the new one better. The great difference in the two operations is not only the method of operating but the men who do them.

It is admitted that we must keep the lids away from the eyeball for safety, and Smith should have that glory, because he taught us how to hold the lids away from the eyeball, and that is of vital importance. There are one or two factors which enter into the loss of vitreous; the greatest one, and the one that can be eliminated is that the patient squeezes the eye, and the other is that the operator squeezes the eye. If the lids are held away from the eyeball, you eliminate most of the patient, but you cannot eliminate all of them, because they will not be elimi-

nated. Dr. Sattler spoke about injecting cocaine or novocain to paralyze the orbicularis. That is a good scheme if it could be done, and it may be done by someone.

You can eliminate the patient as much as possible by having a good assistant, and any surgeon can have a good assistant without much trouble. One of the greatest obstacles in Smith's operation has been the statement which he made in his book, that it required an assistant who had assisted in one hundred operations, or something to that effect, before he could be relied upon. In our hospitals we would never have an assistant, because the house surgeon would be gone before he saw one hundred operations, and most hospitals rely upon their house surgeons as assistants. I do not believe there is a hospital any place in the U. S. A. where an assistant is permitted to assist one hundred times in cataract operations. A good assistant can be made before the operation is undertaken by taking two nurses and training them upon each other with holocain in the eyes, and thus familiarize themselves with lid control. You will be surprised how dexterously they can do it; usually much quicker than doctors. In a week you could have two thoroughly trained assistants by working an hour a day with them. Of course the operator must be familiar with the technique before teaching the nurses, but if this can be done, and it can be, you can have a thoroughly reliable assistant before you begin operating. In any operation, when the eyeball is opened, it is imperative that the lids be held away from the eyeball.

In every cataract operation, no matter what method is selected, a good incision is necessary. Delivery of the lens is only a part of the operation.

If Dr. Smith makes a bad incision, he cannot remove the lens readily. It is impossible to learn to make a good incision watching others operate, but many of you know how to make a good incision.

A few years ago at a meeting of the A. M. A., I read a paper on a method of obtaining technique in cataract operations by means of the kitten's eye. I believe they offer a good substitute for the human eye for obtaining technique in cataract operations.

Many of you are familiar with my lid hooks. Dr. Vail has one probably better than mine. Col. Smith has one he prefers, but the principle thing is to teach the nurse to keep the lids away from the eyeball. I do not see any reason why any operator should not commence using Smith's technique tomorrow. I do not see why an amateur should perform a cataract operation at all. He should first operate a sufficient number of kitten's eyes to become competent. In the kitten's eye the cornea is as thin as the human, and the iris is similar to the human, while the iris of a pig is more like leather.

The cataract operation in my judgment is a high class trick. You must do the trick many times to be able to do it successfully. I believe some day someone will modify the intracapsular operation that Smith is doing today. Maybe he will modify it, probably some of you will do it, to make it safe for all good operators, but it is now superior to the old operation.

Look at it in the right manner. First, get a good assistant, and that is so easy to do, before beginning the operation. Second, operate a large number of kittens' eyes. I believe if the late Dr. Green were to come back, he would say that of all the complications put together, the speculum beats them all. I discarded all specula when operating for cataract, seven years before I went

to India. I have always been afraid of the speculum and have witnessed the loss of many eyes from its use. I have seen people squeeze the eye when told before the operation not to do it, and squeeze the lens and vitreous out. When I lose vitreous it is my fault. I have a good assistant and I eliminate the patient as much as possible.

I thank Dr. Vail and the society for the opportunity to come here to see Col. Smith operate again. I would have gone ten times as far and would do it over again. In my opinion he is the greatest cataract operator the world has ever seen, or will ever see, and if ophthalmic surgeons would pick out the good points in his technique and apply them to the operation they are doing, it would be a great step forward. His technique applied to the old operation would add much to making the cataract safe. If ophthalmic surgeons were as free to compliment as to criticize, they would be pointing out the safety devices Smith has given us instead of criticizing the intracapsular operation in general.

DR. E. L. JONES, Cumberland, Md.:—I am utterly incapable of discussing this question from an operative standpoint. I agree with Dr. Fisher's remarks in regard to Col. Smith's broad-mindedness and willingness to accept the ideas of others. Some years ago I published a paper throwing some light on the method of treating early cataract. About that time Col. Smith made some announcements in regard to treating cataract in the early stages, with quite parallel conclusions, and I have been treating them for many years. I may say that the treatment of cataracts, if taken early enough, is a thing that should not be neglected, as they can usually be arrested.

DR. EDWARD DENNIS, Erie, Pa.:—It is indeed a great privilege to be present at this meeting. I started out in the footsteps of my father, who preceded me in the practice of ophthalmology about thirty years. The first time I heard of the Smith operation was while I was a student at the University of Pennsylvania, and the snatch of conversation I overheard between Dr. L. Webster Fox of Philadelphia and my father impressed me that "vitreous loss" and "Smith operation" must be near neighbors,—all of which meant little to me at that time, eleven years ago. Later on, when I went into practice with my father, I had the temerity to want to do the operation of removing the lens in its capsule. I had not heard of Dr. Fisher's suggestion of acquiring technique by operating on kittens' eyes, but I gathered all the cats' eyes I could find. The corneas were rather tough but they served the purpose. Pigs' eyes were tried but were less desirable than cats' eyes. Finally, after studying and almost committing to memory Col. Smith's book, so clearly illustrated by Dr. Vail, on the technique of this intracapsular operation, I was granted the privilege in the Soldiers Home in Erie to try this operation. I had never tried it on a human being and the old gentleman who was to be the patient had complete double optic atrophy. He also had a slight opacity of each lens,—an ideal case, I thought. He was told that if he was willing to have me operate on his eye, I would be glad to do so but no promise would be made for a favorable result or indeed any vision at all. He volunteered the operation even with no assurance of success. Hence, my first Smith operation which came out by way of beginner's luck perhaps, beautifully. I was very much encouraged.

Since that time I have done about fifty such operations with some very brilliant successes and with several unfortunate results. There is one untoward result that has not been mentioned to-

day and I would like to put it in the form of a question to Col. Smith. The condition of an apparent secondary cataract forming after the lens has been extracted in its capsule with no other complication as iritis and uneventful healing of the wound. In two of my patients I have noticed that the pupil two or three months following the operation has become obscured with a gossamer-like veil. Dr. Lewis Ziegler, of Philadelphia, wrote a paper, I believe, describing a condition he called an adventitious hyaloid membrane. I do not know the pathology of this condition and have been unable to understand it.

Another thing that occurs to me as a hazard in the Smith operation is the consequence of iris prolapse with dreaded secondary glaucoma following. The great importance of a deliberate and careful reposition of the iris cannot be overstated. In replacing the iris the spatula should not only free the angles of the wound where it is always jammed following a lens delivery, but it is essential to rake the peripheral stump (the base of the iridectomy) from the scleral side of the wound. If we fail to do this it is liable to become entangled or stick to the intra-ocular wound edge and we cannot observe this from the outside. I had a case illustrating the evil consequence of such incarceration of iris. About two or three weeks after the operation I observed two bluish black dots in the scar of the corneal incision. The tension of the eye steadily increased and one day disaster overwhelmed the eye in the form of infection that terminated in panophthalmitis. I remember explaining my predicament to Dr. Vail two years ago and I think he gave me a very good explanation of the mechanism of the infection. The incarcerated iris acted in the manner of a lamp wick and provided a vehicle for infection. If the conjunctiva became involved, the incarcerated iris was there to carry it within the eyeball.

Another case of post-operative prolapse had healed tight in the wound and gave rise to intra-ocular tension. In this instance, I grasped the scant bleb of iris with fine forceps and cut off as much as possible with one snip of the scissors. I had dissected back a conjunctival flap before doing this, with a stitch in place at either end of the flap which was drawn down by tying the anchoring knots. The flap thus covered over the site of the incarcerated iris and gave added protection to an already weak scar. The tension of the eyeball dropped from 43 to 18 with the gratifying result of 20/30 vision which has been maintained for over two years.

Going back to my question to Col. Smith I would like particularly to ask about the secondary membrane which forms in some cases.

DR. WEBB W. WEEKS, New York:—I feel that I can say very little about cataract operations myself, because I have done so few, and none by the intracapsular method, but I might say a little in regard to Dr. John Weeks' experience in that line. He is doing the older operation, and still adheres to that operation, because he thinks it is the safest in his hands, and at this stage of his career he does not care to change. In his operative experience it seems that he has had very little post-operative iritis, or complications from the lens or capsule remains, although a certain percentage possibly as high as 75 to 80%, of his cases do develop secondary capsular cataracts. For these secondary cataract operations a dissection is done (a rather minor operation in Dr. Weeks' hands) and the end visual results have been most gratifying.

DR. IVOR G. CLARK, Columbus:—Dr. Vail invited the younger surgeons to take part in this

discussion. I do not wish to be too much encouraged by the doctor's statement but would like to ask Col. Smith a question.

Is it possible to do a successful extraction in the capsule and still retain the conjunctival flap? With the use of the conjunctival flap my successes have been more uniform.

I have been associated with both Dr. Timberman and Dr. Clark, assisting one and then the other for a number of years and these men take different positions on the method of extraction to be adopted. I can honestly sympathize with the view point of each without being partisan.

DR. CLARENCE KING, Cincinnati:—The chief difficulty encountered by those who employ the Smith operation arises from making too small an incision. It is easy to be mistaken as to the size. It takes careful inspection to see that the incision is large enough and it requires courage to take scissors and enlarge it if it is not adequate. There is a feeling against introducing another instrument and the tendency is to go ahead and try the intra-capsular extraction with the hope that it will come out all right with the small incision. A scissors has been devised with one blade somewhat longer than the other. The longer blade is introduced into the anterior chamber and in the event that the first cut is not large enough another cut can be made without reintroducing the instrument.

More than usual care is required in the Smith operation to guard against iris incarceration. Reposition of the iris, not only after the lens is expelled but before its delivery, will greatly diminish the tendency for the iris to be pushed into the angles of the wound.

DR. POSEY, Philadelphia:—Mr. President, I come to sit at the feet of Gamaliel rather than to offer anything of my own. I have felt about the Smith Operation like St. Anthony when tempted by some alluring forms around him—that they were not for me, not because the operation is not a good one, not because it is not better perhaps than the one which I am doing, but because I do not have sufficient opportunity to perfect myself in doing it. After the field in Philadelphia has been gone over by my friend, Dr. Fox, there is not enough for me left. I have done in one year more than 75 operations, but I have felt that not doing more than that I had not the right to do anything except perfect myself in what I thought to be the simplest, easiest and safest operation for the removal of the lens. Therefore, I have done the combined operation, the operation with the preliminary iridectomy.

COL. SMITH (Closing):—There were not many questions asked. Dr. Dennis asked in regard to the membrane forming after the operation. I have seen a few of those cases, but I do not often see things of that sort.

As to the question about the iris, and as to the reposition. If one is unfortunate enough to get a prolapse I would advocate letting it alone. Personally I am much more afraid of the iris under the conjunctiva flap than to remove that thing entirely. Put a little tension on the eye under cocaine, press a pair of good scissors down on it so as to get a grip, snip the thing off, and then close it up. The thing will heal up and will not give any trouble. Where you really do get trouble with the iris prolapsed is when the iris is caught in the very angle of the wound. We see that resulting from corneal ulcers and that sort of thing. The attachment of the iris near the ciliary attachment is a very dangerous proposition. That is a common attachment at the very angle of the wound, and is to my mind the

great objection to making the incision much deeper than the scleral cornea. You can, of course, go two or three millimeters back, make the wound less in circumference and get equal space. The danger is in the iris near the ciliary region becoming attached. If it does then I co-actinize the case, and then with a good knife stick it down straight, never mind the vitreous or anything, get in sufficiently far and separate that piece of iris from the region. It looks bad to plunge a knife straight into an eye, but there is not the slightest danger. You at once relieve this low form of irritation.

As to the conjunctiva flaps I would say this: You can do an intra-capsular with any flap you like. It has its merits, of course, and its drawbacks. It is flapping about a little in your way, but that is not a very great drawback. To my own fancy it has not any very great merits. I have seen the operation made where the conjunctiva is cemented down, and the operation was made beautifully. I saw the patient a few days later and it was so well cemented down that the scleral corneal incision was separated as much as a couple of millimeters. It was cemented down and did not allow the aqueous to escape, and the whole thing popped open. To my fancy I would rather see the aqueous escape and thus allow the wound to heal properly than to be dammed up.

You are more familiar with the American than I am. I am probably more familiar with the Britisher than you. A proverb in my language is that men generally under-estimate their own abilities. As regards the Britisher that is as true as gospel. I do not know that it is true as regards the American. The Indian proverb, is the reverse from this. The tendency of the day is to emphasize the cautious practical side of things. While a student at Dublin and London, we were told of the thousand and one accidents that may occur in general surgical cases, until the whole tendency was to take the nerve out of you, and you felt that if you were to draw blood you must be prepared for these thousand and one accidents. After we got to work, and worked a little while, we found that most of these accidents in practice never do occur with us. Speaking from my own experience as to the intensely practical side of the question, my observation is that the teacher of surgery should make it his first duty to establish the confidence of the pupil in himself, not to take the confidence out of him. After his confidence has been established in his own ability to use his common sense, more than half the battle has been accomplished, and you will get ahead with him then. Unless you do succeed in doing that you will never make an operator. So that I would say to the young men—do not be too disappointed. We all make mistakes, we all have our failures, but there is no reason why we should not sleep as soundly that night as well as any other night, as long as we use our own common sense and judgment. I think you will find that most men will do much more on that than they will from a lot of lectures. Of course, it means a lot of reading. To my own fancy there is too much of what we call post-graduate work in these days, and too little of the mechanical art. Lawson Tait, in his time I suppose the finest surgical mechanic in existence, stated that if he had a son who wished to study medicine, when finished he would apprentice him twelve months to an artisan, to learn how to use the hammer and chisel, and that when he could do that he would have acquired the proper amount of medical skill in the use of in-

struments. By the way, I am a mechanic myself. If a man has learned to use the hammer and chisel you can trust him with a cataract knife afterwards. It cultivates the delicacy of touch. After he has cultivated that he can use anything, and he has grown unconsciously what I determine the mechanical sense then as regards doing a cataract.

I quite sympathize with Dr. Clark and Dr. Fox. A cataract operation of any kind is not the thing to be gone at without a little careful common sense study of the mechanics of the procedure. You must commence some time. If I had never done the cataract operation at all, well, we would be just where we had started. I once came across a man who commented on a young surgeon who had made a certain operation on a child, and the child died. He said it was a terrible state of affairs. I asked him if he expected a young man to learn to swim if he was never allowed to go into the water? Of course, the young man must have a start. He may not succeed with his first case, but as time goes on he will be all right. I would like to say, if in every case you will make a 180 millimeter degree incision you will find everything will come out to your satisfaction in most cases. If it does not, no harm is done. The incision is then all right if the other operation is made. I am confident that the great difficulty is that the incision is too small. Make your incision 180 degrees in the scleral corneal, and you will find that your difficulties will be largely eliminated. Then, of course, you must be careful as to the amount of force used. You will find that a fairly big proportion of the senile cataracts will come at almost a touch. As time goes on you will be disposed to touch them a little heavier and to go farther in.

As regards everybody doing a cataract operation, the cataract operation is a major operation, and in America there do not seem to be enough cataract operations to go around. Those who have succeeded in doing the intra-capsular extraction approve of it. Cataract extraction is destined to become a specialty within a specialty. A man who does only a few cataracts a year can never expect to acquire as high class skill as he would like.

A rising vote of thanks was extended to Col. Smith, in appreciation of his visit.

In compliance with the motion as expressed in Dr. Clark's paper, Dr. Vail appointed Dr. J. E. Brown, Chairman of the Committee, with power to appoint the men who would serve with him, in the investigation of cases operated upon in Ohio, more particularly the Soldiers' Home, and report back to the Society at its next annual meeting.

War Risk Insurance Work Grows

The Dayton branch of the War Risk Insurance Bureau has been enlarged to more adequately care for the veterans of that section of the state. Drs. F. L. Salisbury, R. C. Austin and H. F. Koppe have been appointed examiners to assist Dr. H. H. McClellan. The consulting staff, including specialists in various lines, will remain the same but will include Drs. A. E. Hewitt, E. C. Fischbein and H. H. Williams, in addition to the four examiners. The Dayton branch receives men from as far north as Lima, south to Middletown, west to the state line and east to Washington C. H.

New Occupational Disease Law

(Continued from Page 531)

It should be remembered that the report to the Commission of the discovery of an occupational disease declared to be compensatable under the new law, is in addition to the claim report which shall also be filed with the Industrial Commission. The Commission and the State Department of Health have pledged their assistance in working out uniform blanks so that physicians will not be burdened by making two entirely distinct reports to those two state departments on each case of occupational disease. With both these departments now housed in one state office building, formerly the Hartman Hotel building at Main and Fourth Streets, Columbus, a closer co-operation in these matters will be possible.

With the confusion attendant on the moving of many of these state departments to the new office building, there will undoubtedly be delay in the transaction of official business. This unavoidable reason for such delays should be taken into account. However, if response is not made within a reasonable time to claims for medical service and other correspondence with the Industrial Commission or official business with other state departments, the office of the State Association is ready and glad to assist in expediting these matters and in rendering any other service to its members.

Northwestern Association

Advance announcements concerning the meeting of the Northwestern Ohio Medical Association in Toledo on October 7, indicate that the meeting will be featured by a splendid program which will doubtless draw a big attendance from throughout the district and state. The tentative program includes clinics at the different hospitals during the forenoon and special orations in medicine and surgery in the afternoon. Orators will be Dr. John F. Erdman, New York City, on "Malignancies of the Large Intestine", and Dr. Herman O. Mosenthal, New York City, on "Nephritis".

The Doctor's Sacrifice

In the last two months there have been two skilled physicians who have lost their lives in sacrifice to their patients. Both of them happened to be Philadelphia surgeons, and both died as the result of infections suffered during operations which they refused to interrupt in order to save their own lives. In the same time there may have been other doctors quite as heroic whom we have not heard of, for the life of a good physician is full of risk and sacrifice. Even if they are not called upon consciously to make the supreme sacrifice for the sake of their patients, as were these two men, they must give

constantly of their strength, their nerve power, their reserve forces.

Ready to answer calls at all times of the day or night, they ignore their own pleasures, comforts, or even needs to an extent which the general public, engrossed in its individual sufferings, seldom considers. For the few among them who are mere money-makers, or cold-blooded scientists, as the phrases go, there are the many who are true humanitarians. It is not likely that any other profession can show more or as much altruistic effort. It is an altruism which the doctors themselves never discuss, but which all the more should earn them honors and the devoted gratitude of the public.—The Ohio State Journal

Hall of Fame

In the election of Dr. William T. G. Morton to the Hall of Fame the allied professions of medicine and dentistry have been signally honored. By their overwhelming vote the electors also evidenced the appreciation of the public at large for the beneficence of anesthesia.

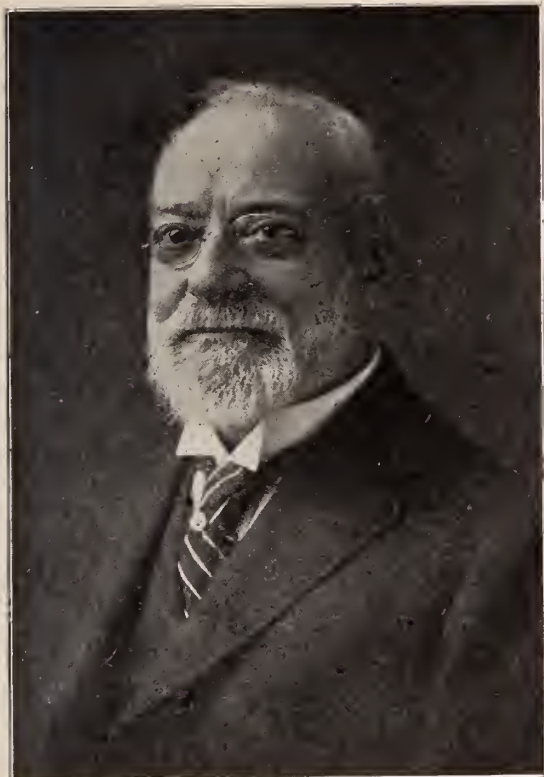
Recently at the annual dinner of the American Anesthetists during the A. M. A. week Dr. S. Adolphus Knopf, a leading advocate for the honoring of Morton, announced that it would be a proud privilege for the Associated Anesthetists to place a bronze bust of Morton in the niche assigned him by the electors. This is to be done on October 16, in celebration of the Diamond Jubilee Anniversary of Morton's first public demonstration of ether anesthesia.

The Associated Anesthetists are therefore urging all those interested to make a substantial contribution for this purpose. The organizations which are united in their interest in this matter are American Association of Anesthetists; New York Society of Anesthetists; Interstate Association of Anesthetists; Pacific Coast Association of Anesthetists; Canadian Society of Anesthetists; Mid-Western Association of Anesthetists, and National Anesthesia Research Society.

The request is made that checks or money orders be sent at once to F. H. McMechan, M.D., secretary-treasurer of Associated Anesthetists, Lake Shore Road, Avon Lake, Ohio.

Books Received

Physical Diagnosis. By W. D. Rose, M.D., Lecturer on Physical Diagnosis and Associate Professor of Medicine in the University of Arkansas; Demonstrator of Clinical Medicine and Chief of the Medical Section of the Isaac Folsom Clinic; Visiting Physician Logan H. Roots Memorial (City) Hospital, Little Rock, Arkansas. Second Edition. Three hundred nine illustrations. Price \$8.50. C. V. Mosby Company, Metropolitan Bldg.



Dr. Augustus Ravogli, President-Emeritus

Dr. Ravogli who was elected president-emeritus of the State Association at the last annual meeting, is the second to hold this distinguished office, his predecessor having been the late Dr. John C. Reeve of Dayton, who died soon after his election at the 1920 meeting. Dr. Ravogli is 70 years of age; a graduate of the University of Rome, Italy, 1873; emeritus clinical professor of dermatology and syphilology at the University of Cincinnati, and chairman of the Section on Dermatology, Proctology and Genito-Urinary Surgery of the State Association. Aside from his affiliation with the Ohio State and American Medical Association and the American College of Surgeons, Dr. Ravogli holds membership in a number of special societies, including the American Dermatological Association, American Urological Association, Chicago Urological Society and the Philadelphia Dermatological Society.

It is said that a true estimate of a man's worth may be had from the place which he holds in the esteem of his colleagues, those who know him best. Therefore, the eloquent address of Dr. Charles L. Bonifield of Cincinnati in nominating Dr. Ravogli for the honorary position of president-emeritus before the House of Delegates is significant.

"It may be presumptuous for Cincinnati to beg the honor of president-emeritus for one of its citizens, but when I have named him, I believe that you will all see the reason why I have the temerity to do it. In Cincinnati we have a doctor

who has attended the meetings of this Association every year for more than thirty years. This year he contributed a paper before a scientific section. He is no longer a young man. Not only has his hair whitened but his form has become bent in the service. He was born on foreign soil, but during the late war there was no more loyal American than this gentleman of whom I speak. Somebody told him that in Cincinnati we had ten thousand Germans who sympathized with the German cause, to which he replied, 'Yes, and we have twenty thousand lamp posts.' The reason that he is a citizen of Cincinnati no doubt is because when he left his native soil and the balmy climate of Italy, no other place seemed to be so attractive to him as Ohio, and when he came to Ohio he wanted to go to its southernmost corner in order that the climate might be as much like that of sunny Italy as it could possibly be and still be in this great state. I feel that this Association would honor itself by electing Dr. Ravogli as president-emeritus."

New Prescription Regulations

In spite of the fate of the Willis-Campbell anti-beer bill which was pending in the United States Senate on July 21 when this was written, Ohio physicians will be even more restricted under the new state law (McCoy Senate Bill No. 178) which becomes operative on August 3.

It will be remembered that this new Ohio statute previously passed in the Ohio Senate and concurred in by the House of Representatives on April 20th, had for its primary purpose the prevention of the sale, manufacture or prescribing of beer for medicinal purposes in Ohio. It further limits intoxicating liquors which may be prescribed to "*pure grain or ethyl alcohol or spirituous liquor in quantities of one-half pint in any period often days, for the aged, infirm and known sick, or alcoholic medicinal preparations which have been named or hereafter shall be named by the Federal prohibition commissioner and held to be fit for beverage purposes and listed in the U. S. P. and N. F.*"

This means that spirituous liquors which have been prescribed in quantities of one pint heretofore, will be limited to one-half pint within any period of ten days for the same patient, and that such patient must be "aged, infirm or known sick." The new law also eliminates the use of wine on prescription for medicinal purposes.

The twenty-three preparations at present listed in the U. S. P. and N. F. and named by the federal prohibition commissioner as "fit for beverage purposes" and which cannot be prescribed by physicians unless they hold federal permits, and unless such prescriptions are issued on blanks provided for this purpose the same as for spirituous liquor are: aromatic elixir, elixir licorice, comp. spirits juniper, comp. tincture cardamon, comp. tincture lavender, elixir anise, red aromatic elixir,

elixir bitter orange, aromatic tincture, comp. elix. cardamon, comp. elix. taraxacum, tincture caramel, comp. wine orange, wine wild cherry, bitter tincture, aromatic elixir licorice, blackberry cordial, bay rum, tincture Jamaica ginger, wine of beef, wine of pepsin, elixir terpin hydrate, spirits of ether or Hoffman's anodyne.

The above list of preparations which unmedicated are considered as intoxicants, may however, be prescribed without federal permits provided they are medicated in such a manner that

each fluid ounce contains a dose as a whole of some U. S. P. drug.

The new Ohio law, effective this month, also compels physicians holding federal permits to file a copy thereof with the commissioner of prohibition of Ohio, accompanied by an affidavit of the person to whom the permit is issued, to the effect that the same is a true copy of the original. Such copy and affidavit must be sent at once to the State Prohibition Commissioner, Don V. Parker, Columbus, Ohio.

NEWS NOTES OF OHIO

Cincinnati—Dr. William H. Peters, health commissioner of this city, is convalescent after an operation for appendicitis which he underwent late in June. Dr. Peters became ill while on a trip to Wisconsin and was hurried home.

Akron—Dr. William B. Scherr, staff physician at the local city hospital, recently resigned to enter private practice at Morgantown, West Virginia.

West Union—Dr. T. C. Crawford and family have removed from this village to Portsmouth, where he has established offices.

Toledo—At the first meeting of the 148th Ambulance Company, Veterans' Association, in June, Dr. Norris W. Gillette was elected president. More than 50 former members of this northwestern Ohio medical unit attended.

Cincinnati—Dr. H. S. Kuhn is enjoying a western trip, which will include a visit of several months in the state of Washington.

Marengo—Dr. F. E. Thompson received severe burns about the hands and arms recently when he attempted to remove a barrel of oil from his garage after discovery of a fire there.

Cincinnati—Dr. Charles S. Dryer of this city, and Dr. Malcolm Kemper of Louisville, Kentucky, have been elected as president and secretary-treasurer, respectively, of the American Association of Industrial Physicians and Surgeons. The organization held its 1921 annual meeting at the Richardson Paper Company, Lockland.

Milledgeville—Dr. Carl A. Hyer, son of Dr. F. E. Hyer, has assumed a position on the staff of the Mayo Hospital, Rochester. Dr. Hyer is a graduate of Ohio State University College of Medicine and lately completed an internship at Protestant Hospital, Columbus.

Galion—Dr. E. D. Halfrich, formerly a resident of this city and member of the state legislature,

has returned to Ohio after a period of post-graduate study in New York City and has opened offices in Columbus.

Delaware—Dr. A. J. Pounds has relinquished his private practice and will devote his entire time to the duties of health commissioner of Delaware County.

Akron—Dr. Walter M. Leonard, who has been director of the Akron hospital unit, Bureau of War Risk Insurance, has been appointed assistant district medical examiner at the district headquarters of the bureau in Cincinnati. He assumed his new duties June 13.

Cincinnati—The Democratic organization of this city has endorsed Dr. Charles L. Bonifield as its candidate for mayor.

Columbus—Lieut. Col. D. V. Burkett has become chief surgeon of the Ohio National Guard, succeeding Dr. H. H. Snively who resigned to become state director of health. Dr. Burkett is a veteran of the Spanish war, and in the recent war served overseas as sanitary inspector and brigade surgeon in the 37th Division.

Rio Grande—Dr. W. E. Howell has disposed of his property and practice in this village and located in Gallipolis.

Toledo—Dr. R. C. Longfellow will sail August 5 for France to take up serologic studies in Paris. From there he will go through Switzerland to Genoa, Rome and Naples; across the Mediterranean to Alexandria and Cairo; into Palestine, the Holy Land and many places of Bible history. Meanwhile the Toledo Clinical Laboratories operated by Dr. Longfellow will be closed until early October.

Cleveland—Dr. Paul J. Hanzlik of the staff of Western Reserve University School of Medicine, has become professor of pharmacology at Stanford University Medical School, California.

THURSDAY HALF HOLIDAY

Physicians of Chillicothe are closing their offices at 2:00 p. m. on Thursdays to all practice except emergency work, and will continue to do so throughout the months of August and September.

Protection of Vacationists by Improvement of Summer Resorts and Other Means Undertaken by State Health Department

In view of the prevalence of smallpox in Ohio at the present time, and the fact that typhoid fever is now almost exclusively a vacation disease, the State Department of Health is planning to provide facilities for the inoculation of summer campers against these diseases.

Toward this end Health Director Snively recently directed a letter to health commissioners of the state urging them to encourage vaccination against smallpox and typhoid of campers and other vacationists. This is a compulsory requirement of members of the Ohio National Guard who expect to attend summer camp, and where a medical officer of the Guard is available he will make the necessary inoculations without charge. However, where no such officer is available, and in cases of Boy Scouts, high school boys and other individuals who may attend summer camps of various kinds, the State Department asks the health commissioners to arrange for their gratuitous inoculation.

Typhoid and smallpox vaccine for the inoculation of National Guardsmen may be secured from the Adjutant General by the health commissioners. The State Department of Health is prepared to supply typhoid vaccine. The cost of smallpox vaccine for inoculating civilians may be borne by the local health budgets.

The letter calls attention to the fact that over 1,000 cases of smallpox were reported in Ohio during May. Vaccination of campers and those who go on vacations will protect the class of people who travel most and are thus most liable to come in contact with and spread the disease. This measure will restrict the spread of smallpox and give to the public a new conception of the functions of the health department, placing the preventive phase of the work before the people. As to the efficacy of typhoid vaccination, reference is made to the illuminating experience of Salem, where the attack rate during the recent epidemic of typhoid was one in 12 among the population. Among nearly 300 ex-service men in the city the attack rate was less than one in 50.

The State Department of Health has placed in the hands of officials of the National Guard, Reserve Officers' Training Camp, other organizations and summer campers the following memorandum of the assistance which it is prepared to render:

1. Provision of triple typhoid vaccine.
2. Laboratory service. Examination of water drinking, swimming pools, etc.) and other routine examinations.
3. Inspection of sites and advice re sanitary arrangements.

4. Advice re treatment and prevention of venereal diseases.

- a. Two experienced lecturers available to talk to the boys re venereal diseases.
- b. Moving pictures on venereal disease available.
- c. Salvarsan for the treatment of indigent cases available in limited amounts.
- d. Machinery available to locate prostitutes, quarantine those diseased and undertake court proceedings.
- e. Venereal clinics available to care for men discharged with a venereal disease.

5. Investigation of outbreaks of diarrhea, typhoid fever, food poisoning and communicable diseases generally.
6. Care of individuals discharged for suspected tuberculosis.
7. Data available concerning water supplies and sanitary conditions in various parts of the state.
8. Advice re plumbing and disposal of wastes.
9. The local health departments of the state may be enlisted to give assistance of any kind along health lines.

In return for the assistance detailed above medical officers of these camps are requested:

1. To report to the health commissioner having jurisdiction on the regular cards the presence of reportable disease in the camps.
2. To refer to the State Department of Health those individuals rejected because of venereal disease or suspected tuberculosis.
3. To cooperate with the State Department of Health and the local health commissioner in all preventive measures.

In keeping with its program of protecting the health of summer campers and vacationists, the State Department of Health plans to improve sanitary conditions at Ohio summer resorts as much as possible. This will probably be done by means of local health departments which will be given advice and assistance by the staff of the state department.

The division of sanitary engineering of the state department has been attempting for years to improve sewerage, methods of sewage disposal and the installation of pure water supplies at the larger resorts of the state. Considerable progress has been made and a number of the larger resorts now have sewers, sewage disposal plants and water supplies of unquestioned purity. In a number of others these improvements are either contemplated or in progress of construction. At some, however, conditions are very poor. At one lake resort sewage discharges into the sand a

few feet away from the water, and there are almost equally bad conditions at a number of others.

Improvements will be recommended as rapidly as possible, and health commissioners are urged to write to the State Department of Health regarding the procedure necessary to bring about sanitary improvements. The division of engineering has a considerable amount of information in regard to the sanitary conditions at Ohio summer resorts and this information is available to health commissioners, physicians and the public generally.

In connection with the above plans the recent report on the survey of state parks made by Dr. Frank Oldt in 1920 for the State Department of Health is especially interesting. Dr. Oldt is an Ohioan who has spent the last ten years in China as a medical missionary. He is now on leave of absence and is taking a course at Johns Hopkins School Public Health, and the report of his survey of the state parks of Ohio will serve as his thesis for his degree in public health.

Dr. Oldt's investigations found methods of sewage disposal inadequate at several of the parks. Private water supplies were bad, and the system of garbage disposal was also at fault. The report shows that these conditions have led to the infection of a comparatively large number of persons with typhoid fever. As an illustration, it is pointed out that the incidence of typhoid fever among those who attend Buckeye Lake is 44 per 10,000 as compared with a rate of three plus per 10,000 for the city of Columbus.

The State Department of Health has jurisdiction over the state parks for one-fourth of a mile from the water, but unfortunately has no appropriation for inspectors. Under these circumstances local health commissioners in adjoining districts have been asked to assist in maintaining proper sanitary conditions at the parks, and already a considerable number of important improvements have been made. This work will be carried out vigorously during the present summer.

Physicians Needed by War Risk Bureau

The following letter received by Dr. Wells Teachnor, president of the Association, from the acting supervisor of the Seventh District of the United States Public Health Service comprising Ohio, Indiana and Kentucky, is published for the information of physicians who may be interested in affiliating with the government service.

Dr. Wells Teachnor,
Columbus, Ohio.

Sir.—The Bureau of War Risk Insurance, charged with the responsibility of examining and treating ex-service men who have or who believe that they have, a disability due to or aggravated by their military service, is attempting to handle an enormous volume of work with an inadequate demand of medical personnel. The immediate demand, is for physicians trained in the

diagnosing of tuberculosis. Physicians properly equipped, may be nominated and appointed as attending specialists, at an annual salary for full time of approximately \$3600, part time proportionately.

Anything which you, as president of your state society, can do to bring into our ranks, medical personnel equipped and willing to attempt this work, will constitute a service to your government and to the ex-service men of the World's War.

"Communications regarding this matter should be addressed to the Supervisor, Seventh District, attention Assistant Executive Officer.

Respectfully,

HENRY C. GEMMELL,
Surgeon (R), Acting Supervisor, Seventh District."

Annual Conference of Health Commissioners

Health Director H. H. Snively is anxious to meet all health commissioners in Ohio and for this reason is busily making plans for the annual conference required by law. Dr. F. G. Boudreau, in charge of local health organization, is directing arrangements for the conference and will no doubt be ready to make definite announcements in the next issue of *The Journal*. Tentative plans schedule the meeting for Columbus during September, lasting a whole week and the program covering every phase of the health activities carried on by the local organizations. Entertainment for the wives of commissioners who attend the conferences will probably be provided.

Small Advertisements

Location—Physician in industrial town of 8,000 in general practice and obstetrics is planning to be absent for a year and has good proposition for the right physician to take over practice during that time. Address M. L., care *The Journal*.

For Sale—Ultra Violet Ray machine; 2' elec. blankets; 1 elec. pad. Address E. J. Friedrich, London, Ohio.

Wanted—To buy a second-hand hand or electrical centrifuge. C. T. care *The Journal*.

Wanted—Locum tenens for month of August in northern Ohio or southern Michigan. Graduate, 10 month's hospital experience. State salary or compensation. Address L. P. L'Homme, M. D., 213 Ontario Street, Toledo, Ohio.

BOOKS RECEIVED

Diseases of Children, designed for the use of students and practitioners of Medicine, by Herman B. Sheffield, M.D., formerly Instructor in Diseases of Children, New York Post-graduate Medical School and Hospital, and Medical Director, Beth David Hospital, Consulting Physician to the Jewish Home for Convalescents and the East Side Clinic for Children. With 238 illustrations, most original and nine color plates. The C. V. Mosby Company, Publishers, Metropolitan Bldg., St. Louis. Price \$9.00.



The State Medical Board has announced that 176 of the applicants for licensure who took the June examinations held by the Board received passing grades and have been granted certificates to practice medicine in Ohio. This number includes eight women, the highest number yet to be certificated at one examination. Four osteopaths, thirteen chiropodists and ten midwives successfully passed examinations and have been licensed to practice their limited branches. Among the successful medical candidates were the following:

College of Medicine, Ohio State University.—Clarence Adams, Thekla A. S. Albanese, Antonio F. Banson, Reuben J. Boesel, James W. Boger, Jaw W. Calhoon, Paul H. Charlton, Joseph H. Clouse, Eva M. G. Cutright, DeLoise H. Downey, John W. Ferguson, Ida A. Fleming, Verl Z. Garter, Howard M. Gilmore, Norman C. Hochwalt, Harry Lutz, Roe J. Maier, Charles D. Miller, Marcus C. Miller, Edith M. Offerman, Carey B. Parker, Harry E. Secrest, Robert S. Sloan, George V. Smith, Fred H. Stires, Vali D. Stone, Anne P. Warfield, Clifford R. Weis, Willis A. Whitman, Howard H. Yoakem.

College of Medicine, University of Cincinnati.—Arthur J. Bender, Fred E. Brammer, Everett S. Cassady, Halford F. Conwell, George H. Cook, Douglas S. Corpron, David C. Davis, Harold F. Downing, Harry Drachenberg, Lloyd K. Felter, Mathew J. Flipse, Clarence L. Fraas, Joseph N. Ganim, Hewitt B. Hannah, George J. Hathaway, Floyd C. Hendrickson, Harold H. Howell, Edward D. Schuiteman, Paul G. Sudhoff, Mahlon J. Inskoop, Herbert C. Jones, William A. Koehle, Hugh A. R. Kuhn, Frank LaCamera, Herman L. Lavender, Joseph Lindner, Herbert P. Malone, John J. Maloney, Paul R. Minich, George H. Musekamp, Orval I. Nesbit, Paul B. Newcomb, Fred B. Pickerel, Carl E. Picek, John V. Pilliod, Mathew C. Pirrung, Jay Price, Joseph E. Robins, Clarence J. Shafer, Hubert H. Shook, Vincent B. Smith, Louis Sommer, Cecil Striker, Harold F. Unsinger, Gerald T. Willke, Lemuel A. Woodburn, Harold H. Wagner, Charles A. Wylie, Richard B. Zevalkink, Alphonse R. Vonderahe.

School of Medicine, Western Reserve University.—Edgar C. Baker, Louis E. Blackman, Arthur C. J. Brickel, Homer D. Cassel, Charles C. Casto, Leon S. Evans, Nicholas L. Farinacci, Joseph Fetterman, Clinton D. Fife, Richard N. Fluent, Stephen J. A. Foerstner, Benjamin N. Freedlander, Walter D. Gilkey, Robert E. Hall, Lucius W. Hipke, Alexander C. Hoffmeister, Louis N. Katz, Jennings M. King, Jr., Solomon H. Lesinger, Harold H. Loucks, Orlando B. Mayer, John H. Plent, William Rosenberg, Eldon

L. Russell, Oscar H. Schettler, Henry M. Schur, John A. Sommer, Frank K. Soukup, Edwin J. Stedem, Herbert S. Steuer, Loren G. Strauss, David R. Talbot, Charles T. Way, Clarence M. Weidenthal, Norman C. Wetzel.

Eclectic Medical College, Cincinnati.—George D. Astler, Vernon W. Astler, Benjamin F. Barnes, Jr., Hyman Bashein, David E. Bixby, Alfred H. Crum, Walter H. Culley, Tony P. Delventhal, George W. DeMuth, Edward A. Dickson, Frederick R. Ematrudo, Osias L. Friedman, David Drieman, Edward A. Grad, Samuel B. Greenwood, William J. Ledwin, Clarence J. Ohlbaum, John O. Perry, Wilbur S. Powell, James C. Pugh, Benjamin F. Pushin, Julian Robinson, Walter B. Sloan, Charles R. Smith, Franch N. Smith.

School of Homeopathic Medicine, Ohio State University.—George R. Aiken, Virgil G. Damon, Paul D. Grove, Ralph W. Hoffman, Peter P. Jaglenski, Frank G. Pettibone, Frank V. Riche.

Out of State.—Frederick R. Bueche, Georgetown University, Washington, D. C. Cecil W. Hancox, Hannemann Medical College, Philadelphia. Paul S. Richards, Harvard Medical School, Boston. Robert J. McGuinness, Jefferson Medical College, Philadelphia. Charles L. Hartsock, David Steel, Johns Hopkins Medical School, Baltimore. Thomas C. Sheridan, Medical College of Virginia, Richmond. Herman L. Hunter, Meharry Medical College, Nashville, Tennessee. Hugh O. Worthing, Northwestern University Medical School, Chicago. Louis B. Farri, Royal University of Padua, Padua, Italy. Edward J. Novotny, St. Louis University School of Medicine, St. Louis. Lawrence H. Getty, Temple University, Philadelphia. Valer George Barbu, Joseph Hornstein, Sarolta Selymes, Farkas W. Steiner, Adolph Widder, University of Budapest, Budapest, Hungary. Louis L. Hobbs, University of Pennsylvania, Philadelphia. George M. Blank, Wendell H. Montgomery, Gail A. Roose, University of Pittsburgh, Pittsburgh. Frederick C. Robbins, University of Toronto, Toronto, Ont., Canada. Mary Louise E. Brown, Ruth P. Walker, Woman's Medical College of Pennsylvania, Philadelphia.

National Health Institute Postponed

The proposed public health institute which the United States Public Health Service had contemplated holding in Washington, D. C., during the fall of 1921, has been indefinitely postponed. This action was taken at the request of the American Public Health Association because of the fiftieth annual meeting of that organization in New York City, November 14-18, and other activities which would conflict with the Washington gathering.

Favorable Court Decision on the Statute of Limitation in Malpractice Suits Is Another Victory for Association's Counsel

Although the legal steps by which the State Association conducts the defense of members who are sued for alleged civil malpractice, are not of general interest to the membership, there is an occasional exception. One of these stands out prominently in the semi-annual report of the Association's general counsel for the six months' period ending July 1.

The case in point not only emphasizes the wholesome influence which the State Association's active interest in the medical defense field is exerting, but presents striking evidence of the effectiveness of the cooperation being given to private indemnity companies in the defense of members insured by their policies.

This case was not one in which the State Association had originally taken part in the defense, the two defendants, both members of the Association, being insured by private policies. It was heard in both the Common Pleas Court and the Court of Appeals of a northern Ohio county, and decided in favor of the defendants in both instances. It was next reviewed by the Supreme Court which affirmed the lower courts.

The point involved was the question as to when a cause of action for malpractice accrues. This was a point which the Ohio Supreme Court had not previously been able to definitely determine, with the result that there are conflicting opinions in this state as to when such a cause of action accrues, i. e., whether at the time the act or neglect is committed, at the time the injury is discovered, or at the termination of the relation of physician and patient.

In this case, defendants performed an operation on the plaintiff on March 7, 1916, in which it was alleged that a sponge had been left in plaintiff's body. No after-treatment was given by either of the defendants and suit was filed April 30, 1918, more than a year after the operation was performed and less than a year from the time the sponge was said to have been removed from plaintiff's body.

Both the defendants, as well as their counsel, joined in a request to the State Association that it authorize its general counsel to take part in the Supreme Court hearing in view of the importance of the point to be decided. After due consideration the chairman of the Committee on Medical Defense and our general counsel decided that the Association's participation would be warranted, and accordingly, our counsel filed a brief as "*Amici Curiae*" and took part in the oral argument before the Supreme Court.

The Supreme Court affirmed the Court of Appeals and the statute of limitations is, therefore, now held to run from the time when the relation of physician and patient terminates. The Association's part in bringing about this favorable

result cannot be overestimated. An adverse decision would have nullified the one-year limitation for the bringing of malpractice suits in any case in which the the patient could show that he had not discovered an untoward result, or presumptive cause for such result, until after the lapse of a year.

Since January 1, 1921, twelve alleged malpractice suits and three threats of suit have been referred to the Association. Of the twelve suits, defense in four is being conducted by the Association; defense in two was withheld because the defendant members were delinquent in membership dues; and defense in six is being handled by private indemnity companies with the cooperation of the Association. Four other suits previously referred to the Association, and in which it has assumed defense, are also pending.

Diagnostic Clinics Arouse Interest in Correction of Children's Defects

A diagnostic clinic for children was held at Athens on June 14, under the auspices of the Athens County Medical Society and the Board of Health of Athens County general health district, and in cooperation with the State Department of Health. Dr. A. M. Steinfeld of Columbus, was the consultant for orthopedic cases, and Dr. Arthur Helmick, also of Columbus, acted in the same capacity for general cases. Dr. J. M. Higgins, health commissioner of Athens, represented the health department, and Dr. T. A. Copeland the Athens County Medical Society. Representatives of the State Department of Health were present and five public health nurses were in attendance. Fifteen local physicians were present, and fourteen physicians came in from other communities. Nearly all of the city and county officials attended and showed much interest in the proceedings. This clinic was held under almost ideal conditions inasmuch as it was supported by the local medical society and the health department and was for diagnostic purposes only. Twenty-eight orthopedic cases were given thorough examinations and referred to their family physicians, who received recommendations as to treatment from the consultant. A large number of general cases were also examined. All children who attended the clinic will be followed up to see that they secure and persevere with proper treatment.

In only three of the orthopedic cases were no recommendations made, and one of these was already under the care of a physician. Flatfoot, infantile paralysis and other forms of paralyses, tuberculosis, clubfoot and other malformations of the feet and joints comprised the majority

of the cases. The clinic aroused a great deal of local interest and will result in the correction of a large number of defects and the proper treatment of much illness which would not otherwise have been given medical treatment.

On June 30, a similar clinic for children was held at Pomeroy under the auspices of the board of health of Meigs County general health district. Representatives of the local medical society and of the State Department of Health were present. Dr. S. A. McCullough, health commissioner of Meigs County, acted as director of the clinic, and Dr. Herbert T. Thornburgh of the State Department of Health, was consultant. Miss Natalie Merrill, in charge of the Bureau of Child Hygiene of the State Department of Health, helped to arrange the clinic and assisted in its operation. Dr. C. S. Shoemaker of Pomeroy was examining dentist. Visitors included city and county officials of Meigs and neighboring counties. Over one hundred children were present and of these 86 were examined. Thirty-five of the children were examined by the dentist. Forty-one of the children had enlarged and diseased tonsils and adenoids, and 35 had defective teeth. Among other conditions found were otitis media, phimosis, fractured femur, spinal curvature, organic heart disease, malnutrition, feeble-mindedness, inguinal hernia, diabetes, "petit mal", enlarged thyroid and predisposition to tuberculosis. The cases were referred to physicians with the proper recommendations and much health literature was distributed. This clinic did much to arouse public opinion in Pomeroy and Meigs County to the value of preventive medicine. Meigs County has now a full time trained health commissioner and an effective health department. All the cases will be properly followed up.

Tuberculosis Clinics to be Continued

Ever since the State Department of Health announced that a cooperative arrangement had been entered into with the Ohio Public Health Association and the Ohio State Sanitarium to hold tuberculosis clinics throughout the state, requests for these clinics have been pouring in. Practically all counties have now put in formal requests for the clinics and the health commissioners are very urgent in pressing their demands. Two series of clinics were held in Hamilton and Portage Counties and these were so successful that the demand was stimulated. Unfortunately the program was arranged for before the extent of the demand was known, and it was necessary to call a halt because of lack of personnel. Money is now available for the employment of sufficient personnel and the clinics will be held as planned as soon as the necessary appointments are made. Director of Health Harry H. Snively will give this matter his early consideration.

In connection with these clinics the State De-

partment of Health is planning a close study of the more than 10,000 case reports of tuberculosis now in its files, and much valuable information is expected to be elicited from these reports.

Records of cases and suspected cases of tuberculosis found during the examination of drafted men during the war, have been turned over to local health commissioners, who are following up the cases to see that proper treatment is being given and that measures are being taken to prevent the spread of the disease.

DEATHS IN OHIO

Leona F. Barnes, M. D., Ohio Medical College, 1895; aged 56; died at her home in Columbus, June 10. For several years after her graduation Dr. Barnes served as an assistant demonstrator of anatomy. She was the widow of the late Dr. J. Wilcheur Barnes.

Dr. Archibald B. Campbell, M. D., University of Michigan Medical School, Ann Arbor, 1871; aged 76; former member of the Ohio State Medical Association, died at his home in Orrville, June 2, after an illness of two years. A native of Canada, Dr. Campbell spent an active career of 48 years in the general practice of medicine in Stark and Wayne Counties. He is survived by his wife, one son and one daughter. Drs. J. F. Campbell of Massillon and G. M. Campbell of Akron are nephews of the deceased.

William Calhoun Ebaugh, M. D., Jefferson Medical College, 1867; aged 82; died at his home in Granville, June 11, from cerebral hemorrhage.

Marion A. Koogler, M. D., Jefferson Medical College of Philadelphia, 1874; aged 73; died at his home in Marion, July 2, from complications. Dr. Koogler practiced medicine at DeGraff, Ohio, and Eldorado, Kansas, until his removal to Marion in 1912 when he retired. While in the west Dr. Koogler served as surgeon for 26 years for the Missouri Pacific Railroad. He was a veteran of the Civil War. His widow and one daughter survive.

James P. Latimer, M. D., College of Physicians and Surgeons, Baltimore, 1880; aged 68; former member of the Ohio State Medical Association; died at his home in Newark, June 7. Dr. Latimer located in Newark in 1880 and continued practice there for 40 years. He leaves a widow and two daughters.

Argus B. Swisher, M. D., Miami Medical College, Cincinnati, 1882; age 66; member of the Ohio State Medical Association and Fellow of the American Medical Association, died at his home in Marysville, May 24, of carcinoma of the bladder. Dr. Swisher practiced for seven years at Casstown and for 32 years at Marysville. He was a charter member of the Union County Medical Society. His wife and two children survive.

ACADEMIES AND COUNTY SOCIETIES

Cleveland

(Lester Taylor, Sec'y.)

Cleveland Academy of Medicine held its annual picnic and chicken dinner at the Cleveland Yacht Club, Rocky River, July 20. The feature of the entertainment program including baseball, bathing, dancing, etc., were thoroughly enjoyed by the large number in attendance.

FIRST DISTRICT

Adams County Medical Society held a very enthusiastic meeting, June 23, at West Union with twelve of its sixteen members and two guests present. Every minute of the time was occupied with earnest discussion of essential matters. Dr. G. E. Neal of Manchester was the principal essayist. Dr. A. R. Carrigan of Manchester reported two cases under his care undergoing anti-rabic treatment. Dr. W. J. Morgan of Manchester presented an interesting case of carcinoma of the lower eyelid. The annual election of officers resulted in the choice of the following: President, G. E. Neal, Manchester; vice-president, Samuel Clark, Cherry Fork; secretary-treasurer, O. T. Sproull, West Union; delegate and legislative committeeman, O. B. Kirkpatrick, Cherry Fork. West Union members entertained the visiting physicians at lunch at the Northside Hotel. The next meeting will be held at Adams County Mineral Springs on August 17, with the families of members as guests.—O. T. Sproull, Secretary.

SECOND DISTRICT

Darke County Medical Society was entertained at the home of Dr. J. C. Poling, Ansonia, June 9, with an attendance of 28 members and four guests. Following a splendid dinner, there was a brief scientific program in which Dr. Robert Ingram spoke on "Lethargic Encephalitis," and Dr. Rufus B. Hall on "The Acute Abdomen". The essayists, both Cincinnatians, presented their subjects in a way of special interest to the general practitioner.—B. F. Metcalfe, Correspondent.

Greene County Medical Society held its June meeting at Jamestown on the 16th. The essayist of the occasion was Dr. Howard Stitt of Washington C. H., who spoke on "The Relation of Focal Infections to Systemic Disease." Discussion by Drs. Galloway, McPherson, Spahr, Marsh, W. H. Finley, French and Grube.—C. H. Denser, Secretary.

THIRD DISTRICT

Allen County Medical Society gave a banquet at the Shawnee County Club, Lima, June 28, honoring Drs. E. G. Burton, J. B. Vail and Newton Sager, three members of the society who have

celebrated their golden anniversary in the practice of medicine. Dr. Charles H. Clark, president, acted as toastmaster, and Drs. W. E. Hover, F. L. Bates, William Roush, F. G. Stueber, A. S. Rudy and P. I. Tussing responded.—News Clipping.

Hancock County Medical Society had a meeting of unusual merit at Findlay on June 1, when Dr. William P. Brown, former member of the staff of the State Tuberculosis Sanatorium, Mt. Vernon, made an interesting address on "Tuberculosis and Its Treatment". Dr. Brown's address was demonstrated with a number of cases supplied through local agencies.—News Clipping.

Mercer County Medical Society held its regular monthly meeting in Celina, June 14. Dr. D. H. Richardson gave a well-prepared paper on "Obstruction of the Free Passage of Air in the Upper Respiratory Tract."—News Clipping.

FOURTH DISTRICT

Sandusky County Medical Society enjoyed its annual picnic, June 29, at the cottage of Dr. F. L. Kinsey at Muncie Hallow. Twenty-three members and two guests were present. The day was spent in boating, fishing, pitching horseshoes and swimming.—News Clipping.

FIFTH DISTRICT

Lorain County Medical Society held a splendid meeting at Oberlin, June 16, attended by 30 members. Dr. H. H. Drysdale of Cleveland was the guest and essayist of the evening and his subject was "The Differential Diagnosis of Some of the More Common Nervous Diseases." The society will hold no meetings during July and August.—W. E. Hart, Secretary.

SIXTH DISTRICT

Summit County Medical Society's monthly session at Akron, June 14, was attended by 51 physicians from Copley, Cincinnati and Akron. The program: "The Buckey Diaphragm", an illustrated lecture by Dr. J. H. Selby; "Ethers", reports of comparative tests by Dr. A. S. McCormick; "Local Goitre", an address by Drs. J. L. DeCourcy and I. W. Abrahamson, Cincinnati. The last paper was followed by motion pictures of goitre and hernia operations.

SEVENTH DISTRICT

Jefferson County Medical Society, in session at Steubenville, June 14, occupied itself with consideration of clinical cases presented and the discussion of clinical reports. A report of the American Medical Association meeting at Boston was given.—J. R. Mossgrove, Secretary.

Tuscarawas County Medical Society had for its program at New Philadelphia on June 23, an interesting symposium on "Gastric Ulcer". Dr. J. E. Groves spoke on the etiology; Dr. E. D. Moore on diagnosis; Dr. J. M. Smith of medical treatment, and Dr. K. E. Shawecker on surgical treatment. Discussion by Drs. C. T. Miller, C. E.

Davis, E. B. Shanley and D. W. Shumaker. At the meeting of July 14 in Uhrichsville, Dr. Max Shawecker discussed "The County Health Officer."—P. J. Alspaugh, Secretary.

EIGHTH DISTRICT

Athens County Medical Society counts June 14 as one of the most helpful and enjoyable days in its history. In the afternoon of that day members assisted in a very successful clinic for sick and crippled children conducted by Drs. A. M. Steinfeld and A. G. Helmick, Columbus. This was followed by a banquet in the evening given by the Athens members in compliment to the visiting physicians. Both Drs. Steinfeld and Helmick made short addresses at the banquet, which was attended by 38 physicians.—H. M. Taylor, Correspondent.

NINTH DISTRICT

Scioto County Medical Society, in session at Portsmouth June 13, heard an excellent paper on "The Value of Cystoscopic Examination" by Dr. C. W. Wendelken. Dr. Gilbert R. Micklethwaite read a paper on "Newer Methods in Treatment of Burns". Both papers were well received and thoroughly discussed.—H. F. Rapp, Secretary.

Eighth District Holds Busy Session

An enthusiastic meeting of the Eighth District Medical Society was held at Zanesville, July 6. The day's program consisted of clinics at the local hospitals in the morning, followed by complimentary luncheons to the visiting physicians at the hospitals at noon, an excellent scientific program in the afternoon, and a dinner honoring the visitors at the Exchange Club at 6 o'clock.

The afternoon meeting in the Chamber of Commerce, was called to order by Dr. E. R. Brush, councilor of the district, who later turned the meeting over to Dr. C. U. Hanna, one of the vice-presidents. Dr. Lawrence Litchfield of Pittsburgh read an interesting paper on "The Patient Himself." This was followed by an address on "Precancerous Condition of the Cervix," by Dr. R. R. Huggins, dean of the Medical Department of the University of Pittsburgh. The papers were discussed by Drs. Donaldson, Warburton, T. L. Sutton, Melick, E. C. and E. R. Brush, and finally by Drs. Litchfield and Huggins.

In the business session, Drs. J. D. Matthews and E. M. Brown, both of Zanesville, were elected president and secretary of the district, respectively, for the coming year. A motion was adopted instructing the councilor to ask Council of the State Association to admit Coshocton County to the Eighth District. Motion was unanimously adopted requesting publication of the minority report of the Anesthesia Committee in *The Journal*.



A Standby

TWENTY years ago Parke, Davis & Co. introduced to the medical profession the active principle of the suprarenal gland—Adrenalin.

Little was known at that time concerning its physiologic action and therapeutic application. Today, after years of laboratory research and clinical experimentation, Adrenalin holds a foremost place among the standbys of the materia medica.

For the relief of the paroxysm of asthma, for the control of hemorrhage, and in the treatment of shock and collapse, Adrenalin is the first thought of the therapist. In organotherapy it has certain special indications, and as a synergist to local anesthetics it has done much toward bringing local anesthesia technic to its present high degree of perfection.

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DETROIT

Physical Standards for Working Children Under New Ohio Law Meet Recommendations of National Bureau

In a comprehensive report on "Physical Standards for Working Children" just issued by the United States Department of Labor through the Children's Bureau, Ohio is one of eighteen states mentioned as having effectively provided for protection of its child workers by adopting physical standards which all children entering industry are required by law to meet.

The most comprehensive of these laws, including the new statute in Ohio, requires that a child shall be of normal development for his age, in sound health and physically fit for the occupation which he is about to enter. But unless examining physicians have definite standards by which to test development and sound health, underdeveloped and physically defective children are likely to go to work early to their own serious disadvantage, in spite of excellent laws intended for their protection. The committee of eleven physicians which compiled the report, therefore has undertaken to define what constitutes normal development and sound health for children applying for working papers.

These standards will undoubtedly be followed closely in the administration of the new Ohio compulsory school attendance law (House Bill No. 111) which becomes operative on August 25, and which strengthens the administration of school attendance requirements through county officers for rural communities; establishes a complete employment certificate system based on physician's examination and physician's certificate; fixes the age of compulsory full-time attendance at six to thirteen years for both boys and girls and provides penalties for violations.

The new Ohio bill in addition to its efforts for better education and more thorough physical supervision, aims to abolish idleness between the ages of sixteen and eighteen years by requiring school attendance unless actual employment is certified.

The report on "Physical Standards for Working Children" contains minimum standards of height and weight for specified ages, based on the most trustworthy experience and present day practice. It also lists defects for which children should be refused certificates, remediable defects for which they should be refused certificates pending correction, and conditions requiring supervision under which provisional certificates for periods of three months may be issued. The points which examining physicians should cover if adequate protection is to be given the working child are given in detail in the report, which also contains a record blank for the use of physicians in making these examinations.

Periodical examinations for children after they have gone to work are recommended as a still further means of protection. As yet no state

has taken this step, though an exceptionally good opportunity for putting into effect an adequate program of health supervision, says the report, is furnished by the compulsory continuation school laws now in force in 22 states.

Alcohol in Industries

According to press dispatches, the Ohio State Medical Association, through its governing body, has adopted resolutions opposing the present high tax-rate on alcohol for industrial and medicinal purposes. The resolution says that there is no reason why ethyl alcohol should be subject to a 1,000 percent tax any more than any other chemical or drug product. It urges the Ohio Senators and Representatives to work actively for the repeal of the high levy on industrial alcohol.

The action of the Ohio State Medical Association might well be followed by other state medical associations. Furthermore, manufacturing chemists who use alcohol largely in the preparation of certain important remedial agents should join this movement for the reduction of the altogether-too-high price of alcohol used for medicinal and other industrial purposes. When we come to think of it, it is peculiar that the government has seen fit to hedge around the legitimate use of ethyl alcohol with so many needless difficulties. We have no desire to encourage the employment of tinctures and other alcohol-containing drug preparations. Still, alcohol being one of the important solvents of active principles, the excessive tax to which is subjected now, unduly increases the price of all drugs in the manufacturing of which alcohol is used. Our legislators seem to forget that this necessarily works a hardship on the patient who is poor.—*American Journal of Clinical Medicine*.

First National Convention of the American Red Cross

Columbus is to have the honor of entertaining the first national convention of the American Red Cross. The meeting, to be held at the state fair grounds, October 3-8, will be the first of its kind in America, and between 5,000 and 10,000 delegates are expected to attend, in addition to many members of the organization who will come to see the elaborate exhibits, pageants, etc., being arranged. Among the special features will be reunions of overseas nurses and those engaged in public health service work. Both President Harding and General Pershing have indicated their intention of attending the convention if possible, and in the event it is, the latter is expected to deliver the principal address upon the day that the overseas nurses hold their first reunion.

Book Review

Physiological Chemistry.—A textbook and manual for students. By Albert P. Mathews, Ph.D., Professor of Biochemistry in the University of Cincinnati. *Third Edition.* Illustrated, New York: William Wood & Company, 1920.

When one is reminded that the first edition of this valuable book appeared in September, 1915, and one reads, in the preface to the present third edition, just five years later, that the practical part has been largely rewritten and many revisions made in the text because of the development of knowledge since the second edition was published in 1916, one realizes the rapidity with which physiological chemistry has advanced during the period covered by the World War. As might be inferred, the revision has been most extensive in the chapter which deals with vitamins. Part I deals with the chemistry of protoplasm and the cell. The successive chapters include a discussion of the general properties of living matter; the carbohydrates; the lipins, fats, oils, waxes, phosphatides, and sterols; the proteins; the physical chemistry of protoplasm. Part II deals with the mammalian body considered as a machine, its growth, maintenance, energy transformations, and waste substances. The chapters involve animal heat; the raw materials of foods; salivary digestion; digestion in the stomach; digestion in the intestine; absorption; the circulating tissue, the blood; the master tissue of the body, the brain; the contractile tissues, muscle; the connective or supporting tissues, the bones, cartilage, teeth, connective tissue; the crytorrhetic tissues, the thyroid, parathyroid, hypophysis, suprarenal, reproductive glands, pineal gland, thymus; the excretions of the body, urine; the metabolism of the body considered as a whole, carbohydrate metabolism; protein metabolism of body; metabolism under various conditions, vitamins, respiration, and conclusion. Part III, which deals with practical work and methods, includes chapters on equipment of the laboratory; quantitative analysis; the carbohydrates; the fats; the proteins; composition of the foods; salivary digestion; gastric digestion; intestinal indigestion; the blood; the urine. In many instances the discussion of the subject is followed by a comprehensive selected bibliography which should be useful to students who wish to do collateral reading. In addition to the general index of twenty-four pages, there is an index of practical works, and methods which serve as a quick reference aid in the laboratory. The volume, exclusive of the indices, embraces 1126 pages.

The New Pocket Medical Formulary, with an appendix by William Edward Fitch, M.D. Third edition, revised. Price \$2.50 net. The F. A. Davis Company, Philadelphia, publishers.

The Plaintiff and the Press versus The Doctor



The Medical Protective Co. and The Doctor

Dear Sirs:

We want to express our appreciation for the services rendered us in our recent case.

We feel that the success of this case is due entirely to the wonderful defense. As medical men we followed your technique very closely and we wish to say that, in our opinion, you have a talent for this type of cases unequalled by any one. Not once during the entire trial was it necessary to assist in technical questions; not once was the strict rules of medical ethics broken, or the plaintiff's attorney allowed to do so. The courteous manner of handling the witnesses and jurors was also a deciding point in the case. You have a very clear understanding of the law, in our opinion, and a very clear understanding of the relationship of the honest physician to his patient.

This is a victory not only for the Medical Protective Company, and our firm, but for the entire medical fraternity. It should teach some of our legal brothers a sense of the proper proportion of things, especially the difference between the natural unpreventable hazards encountered in the practice of medicine and the cases of real malpractice.

Yours very truly,

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Have a Medical Protective Contract

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Fort Wayne, Indiana

New Law On Auto Lights

As most physicians are automobile owners they will be directly affected by the new Pence law which becomes effective August 16, requiring the equipment of cars with anti-glare lenses. The law provides that the state highway commissioner shall determine just what anti-glare lenses and devices shall meet the state's requirements. As a result, the state highway commissioner has named an advisory committee which arranged for a series of tests and investigations at Ohio State University to determine just what lenses and anti-glare devices shall be used throughout the state.

The Pence law stipulates that "no headlights shall be used on any motor vehicle upon the highways except after the installation of a device to prevent glare, which device has been certified and approved by the state highway department." The law further declares that lights on motor vehicles "shall throw sufficient light ahead to show any person, vehicle or substantial object upon the roadway straight ahead of the motor vehicle for a distance of at least two hundred feet. Any light thrown directly ahead or sideways shall be so arranged that no dazzling rays or beams of reflected light shall at any time be more than three and one-half feet above the ground on a level road at a distance of 75 feet. No spotlight shall be used when approaching another vehicle, except when projecting its rays directly on the ground not farther away than 50 feet and to the right of the center of the highway. Violators shall be fined not more than \$25 for the first offense and not less than \$50 nor more than \$100 for the second offense.

Industrial Accidents

The report of the claims department of the Industrial Commission for the month of June, shows an increase in the number of injury claims filed by 785 and 2 more death claims, with a decrease of 500 in the number of claims in the pending file in all classes of cases. In the medical section only the report shows 100 claims in the pending file of that section at the close of the month, with 39,150 claims disposed of and 5,827 new ones filed.

According to a compilation of statistics by the American Red Cross, based on reports of the department of labor and other official sources, industrial accidents cause the death of more than 22,000 annually. Of every 10,000 American workmen employed seven were killed in industrial accidents during 1918, the latest year for which complete statistics were available. The total of casualties thus was 45 per cent. of the number of Americans killed in battle in the world war.

Important Convention Set for Columbus in September

The ninth annual meeting of the Mississippi Valley Conference on Tuberculosis, scheduled for September 12, 13 and 14 at Columbus, promises to be one of the largest and most important meetings in the history of this organization. Eleven states will be represented, including Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, North Dakota, South Dakota, Nebraska, Missouri and Ohio. In connection with this gathering of tuberculosis workers from other states, there will also be held the annual meeting of the Ohio Public Health Association and the State Department of Health is also planning a conference of state health commissioners for the same week.

Headquarters for the Mississippi Valley Conference will be at the Hotel Deshler, Columbus. Dr. Haven Emerson, Medical Adviser of the Bureau of War Risk Insurance, Dr. James Alexander Miller, New York, newly elected president of the National Tuberculosis Association, and other speakers of national reputation have accepted invitations to address the conference. Dr. Walter McNab Miller, St. Louis, is president of the Mississippi Valley Conference and Dr. Robert G. Paterson, Columbus, is secretary.

The Mississippi Valley Sanatorium Association which meets in this conference will hold one session at the Ohio State Sanatorium at Mt. Vernon. Special arrangements have been made for an excursion to the state sanatorium on Tuesday, September 13th.

Dr. William Paul Brown, president of the Mississippi Valley Sanatorium Association has resigned his connection with the medical staff of the Ohio State Sanatorium at Mt. Vernon, to enter private practice in Cleveland. He will specialize in tuberculosis treatment and will continue to take an interest in this phase of public health work. Dr. Brown has been active in promoting the post-graduate work for physicians at the state sanatorium and in developing tuberculosis clinics throughout the state.

Alumni Election

At the concluding session of the annual three-day conference of the Ohio-Miami Alumni of the Medical College of the University of Cincinnati, June 17, Dr. Charles Noonan became president for the ensuing year. Other officers elected were: first vice-president, Dr. Reed Shank; second vice-president, Dr. J. E. Benjamin; secretary-treasurer, Dr. Sims Oliver; executive committee, Drs. Howard Schreiber, William Freyhoff and A. Vonderahe. The conference was attended by more than 200 physicians from cities throughout the United States.

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OHIO HOSPITAL NOTES

Hardin, Marion and Morrow Counties have acted favorably on the proposed district tuberculosis hospital project and have declared their intention to proceed as soon as one more county can be induced to join them. Other counties in the tentative district which have been considering the matter are Delaware, Union, Wyandot, Crawford and Logan.

—Dr. John T. Murchie of Chicago is the director of the diagnostic clinic opened in connection with the new Mercy Hospital, Portsmouth, recently. Dr. Ralph W. Holmes of Chillicothe heads the X-ray department of the clinic, with Miss Lulu Mann as technician.

—Champaign County Hospital, closed for some time, has been remodeled and was reopened to the public in July.

—Promotion of the efficiency of the children's department of the Massillon County Hospital has been made the objective of the local Kiwanis club for the coming year. The Kiwanians will take up the task of raising money with which to make improvements and purchase equipment needed to make the department thoroughly modern.

—The cornerstone of the new Lutheran Hospital, Cleveland, was laid July 10. The hospital is being erected at a cost of \$250,000, of which \$130,000 has already been subscribed.

—Salem City Hospital trustees have rejected the proposal of county commissioners to care for Columbiana County tubercular patients at the hospital, pending permanent arrangements for their care in a county institution. Inadaptability of the building to the proper isolation of such patients and the protection of student nurses and regular patients were given as reasons.

—Arrangements have been made to provide school advantages for child patients at the Clark-Champaign-Green County district tuberculosis hospital, the cost to be assessed against the school district from which each pupil comes. Dr. C. E. Finney of Springfield is the new medical director of the hospital, serving on a part-time basis.

—The village Sistersville is the recipient of a farm property for use as the site of a new general hospital.

—With the sum of \$15,000 made available to the Lima State Hospital by legislative appropriation recently, Dr. Charles H. Clark, superintendent of the institution, plans to make innovations that will be beneficial to the patients and at the same time reduce the maintenance costs. Whereas it has never been the custom to have patients perform any except light farm work, Dr. Clark will install a printing plant,

sewing machines and other equipment which will enable inmates to pay for their support.

—Keenan Hospital, the first established hospital in Coshocton, passed out of existence July 1. The property was sold for use as a residence.

—Funds in excess of \$13,000 were raised through popular subscription in a recent campaign for the benefit of Bluffton Hospital. This will permit liquidation of the hospital debt of \$11,000 and provide for needed improvements.

—A bond issue of approximately \$750,000 will be submitted to Springfield voters at the November election for the construction of an addition and making of improvements at the city hospital. Miss Dorothy Neer, superintendent of the hospital, is spending the months of July and August in post-graduate work at Columbia University.

—East Side Hospital, Toledo, has acquired property for the site of a new \$200,000 hospital building. A campaign for funds to build the new structure will be conducted as soon as economic conditions are considered favorable. According to Dr. C. S. Ordway, chief surgeon, plans for the proposed structure call for three units, accommodating 80 patients each, and retention of the present building, with a capacity of 44 patients, as a branch for maternity and emergency cases.

—Work was started in July on the new McClellan Hospital, Xenia, to be erected by Dr. Ben R. McClellan on a site recently acquired for that purpose. The building, which Dr. McClellan anticipates will be completed in three months, will be of brick construction, one story in height, and containing four units.

—At a conference of hospital executives with the Industrial Commission recently it was voted to continue the compensation of hospitals in workmen's compensation cases on the patient per diem cost. This plan has been in effect for a year and the action of the conference is considered reindorsement of it.

Elaborate Health Exhibit in Cincinnati

To visualize before the public the ways in which human life may be preserved, and to demonstrate the means by which shattered health may be regained, is the object of the Cincinnati Health Exposition which will be conducted in Music Hall for seven days next fall, beginning October 15. Seventy-five local, eleven state and five national organizations are actively interested in the success of the undertaking. Among these are the Academy of Medicine, Red Cross, Board of Education, all hospitals, the courts, mercantile associations, the Federation of Churches, all welfare societies, the University of Cincinnati and Boy and Girl Scouts. The Cincinnati Public Health Federation has undertaken a publicity campaign of unusually far-reaching nature, to which the exposition will come as a climax.

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BATTLE CREEK SANITARIUM

Modification and Enlargement of Functions of Ohio Bureau of Juvenile Research Are Recommended in Report of Special Legislative Committee

A readjustment of functions and enlarged activities, particularly in the way of medical services in the Ohio Bureau of Juvenile Research, is recommended in a report recently transmitted to the Governor by a special committee of the House of Representatives which investigated this bureau. It may be remembered that the investigation was the outgrowth of wholesale resignations by employes of the Bureau some time ago, due, it was charged, to the uncoordinated executive authority and a disregard for medical findings in some cases.

The committee report compliments the medical work of the bureau under the direction of Dr. Gertrude Transeau, previously connected with the bureau, and the invaluable research and psychological work of Dr. H. H. Goddard, head of the bureau, and recommends that the latter be relieved of executive duties in order to devote his entire time to scientific work. If carried out this recommendation would mean a reassignment of duties under a new administrative head, but with Dr. Goddard retained as chief psychologist.

Among other recommendations is that the present psychopathic wards of the bureau be enlarged to care for such mental cases as would otherwise require temporary commitment in a state hospital.

If the recommendations of the committee and of the State Board of Administration are carried out the functions of the Bureau of Juvenile Research would be enlarged to examination and classification of juvenile wards of the state, to record their condition, physical and mental, and to make it possible for an early return of the juvenile wards to society.

The report is as follows:

"We believe that the Bureau of Juvenile Research is one of the most important, most valuable and far reaching of any department in the State and Ohio may be justly proud of the forward step she has taken in this work.

"While it has been suggested by some that this investigation was for the purpose of injuring or destroying the department, yet, we assure your Honor that our efforts and aims are wholly for the assistance and strengthening of the Department.

"We fully endorse the comprehensive plans of the present Board of Administration to reorganize the Bureau of Juvenile Research so as to increase its range of activities in the matters of diagnosis and care of defective and psychopathic conditions, particularly in reference to the wards of the State and to increase the medical staff and to supply adequate equipment so that all physical

defects may be corrected and the patients be restored to the best possible state of health before commitment and that a follow up work be done in the institutions to which they are placed. This Department would thus act as a central clearing house for the State. In the past where corrective work especially in the rural districts has been costly and very unsatisfactory, as in laboratory tests are not made in smaller places. All this should be done at the Department laboratory.

"We would recommend that future legislatures appropriate from time to time as conditions warrant sufficient funds that all Departments of this Bureau may be adequately equipped to carry on the work which may come under their Departments, thereby saving sums of money expended in our institutions in the care of individuals whose defects might and should have been corrected in early life.

"We would further recommend that the present psychopathic wards of the Bureau be enlarged to care for such mental cases as would otherwise, require temporary commitment in State Hospital.

"To extend the usefulness and stimulate the publicity throughout the state that all probate judges who have as yet not been reached assign their patients and work hand in hand to reap the benefits which it so bountifully affords.

"We also recommend that parents who have children deficient in school work send them to this department for examination so that proper guidance may be recommended and certain efforts along special educational work may be made in order to correct as nearly as possible the deficiencies of these individuals.

"We recommend that the activities of the State Board of Charities be transferred to the Juvenile Department thereby saving unnecessary expenditures and duplications. The Juvenile Research performing the corrective work and the State Board of Charities the placing of these children.

"We are convinced that Dr. Goddard is a scholar of high attainment and unquestionable ability in carrying on scientific psychological investigations, whom we found lacking in executive powers from which we believe he should be relieved in order that he may devote his entire time to scientific work.

"The evidence offered in this investigation fully substantiated the value of the Medical Department which under the direction of Dr. Transeau rendered most efficient and helpful service.

"We recommend that if possible the civil service standing be reinstated to the former members of the staff.

"In conclusion we believe if our recommenda-

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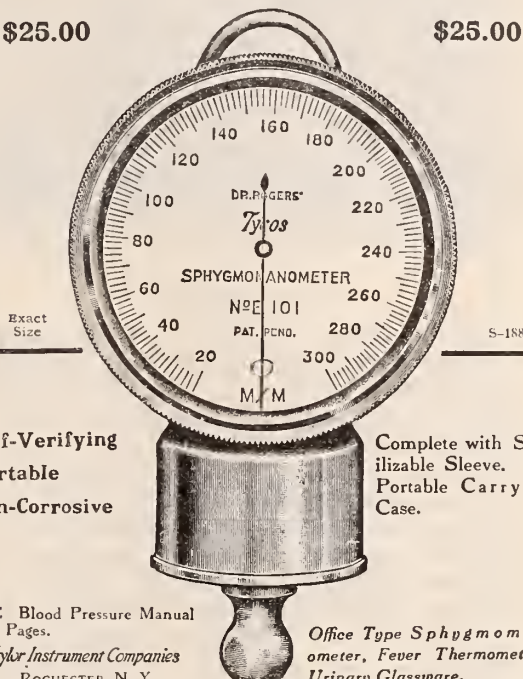
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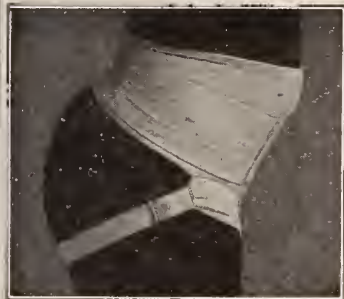
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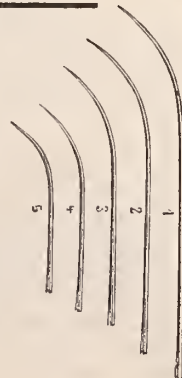
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tions and suggestions are followed this department will render greater service to the delinquent children of the State."

The appointment of the committee from the House of Representatives by the speaker of the House, was authorized under a house resolution some time ago. The members of the committee which conducted a series of hearings and investigations and which submitted the foregoing report to the Governor, consists of W. D. Wendt, of Franklin county, Chairman; Henry M. Carpenter of Jefferson, Stephen J. Benner of Vinton, J. W. Lentz of Monroe, and Harry F. Brown of Fayette.

PROPAGANDA FOR REFORM

Some of Loeser's Intravenous Solutions.—The Council on Pharmacy and Chemistry reports that Loeser's Intravenous Solutions of Hexamethylenamin, Loeser's Intravenous Solution of Hexamethylenamin and Sodium Iodid, Loeser's Intravenous Solution of Sodium Salicylate, Loeser's Intravenous Solution of Salicylate and Iodid, and Loeser's Intravenous Solution of Mercury Bichlorid, manufactured by the New York Intravenous Laboratory, were not accepted for New and Nonofficial Remedies because they are sold under misleading claims regarding their alleged safety and efficiency. The fundamental objection to the claims made for these preparations is the general claim of superiority and safety of the intravenous method. The Council continues to hold that intravenous medication generally is not as safe as oral medication, even with relatively harmless substances and that it does not give "improved clinical results" except under rather narrowly confined circumstances, namely, if the drug undergoes decomposition in the alimentary tract, if it is not absorbed, if it causes serious direct local reactions, or if time is an urgent element. The Council has recognized intravenous preparations which satisfy these requirements. The Council concluded that these solutions did not meet these conditions.—(Jour. A. M. A., April 16, 1921, p. 1120.)

Certificates of Illness

Rescinding and superseding all previous orders relative to the approval of certificates of illness of employes in the United States postal service, Postmaster General Will H. Hayes, under order No. 5898, has instructed all postmasters as follows:

"In connection with the granting of sick leave with pay to the employes of the postal service, in accordance with the reclassification act of June 5, 1920, postmasters and other officials are directed to accept certificates of illness only from practitioners regularly licensed or legally practicing in the state or district where such certificate is issued."

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Plans for Next Annual Meeting, Decision on Policy Matters, Departmental Activity and Committee Appointments Among High Points in Council Meeting

Council of the Ohio State Medical Association met in Columbus, July 10, 1921. Those present were: President Teachnor, President-Elect Carothers, Ex-President Lukens, Councilors Haines, Hussey, Hendershott, Waggoner, Updegraff, Stevenson, Brush and Goodman; Dr. Upham, Chairman of the Committee on Public Policy and Legislation, Dr. Platter, treasurer, and Dr. E. F. McCampbell, chairman of the Committee on Medical Education, and Executive Secretary Martin.

Considerable time was given to discussion and consideration of preliminary plans for the annual meeting of the State Association next year. President-Elect Carothers stated that a movement was already under way in the Cincinnati Academy of Medicine for excellent plans for the entertainment of those in attendance at the meeting. He recommended that the sessions be held in the Gibson Hotel, and the tentative date of May 2, 3, and 4, was decided on by Council, provided those dates did not conflict with any other large convention or with the dates for the annual meeting of the American Medical Association.

A number of communications and suggestions on the scientific program were submitted. After a thorough discussion of the suggestion that the joint meeting of the medical and surgical section on the third morning of the meeting be eliminated, and the various sections hold a third session at that time, it was decided to try to arrange a sufficiently attractive program for the general session on that day so that a majority of those in attendance at the meeting would remain for that session. It was the consensus of opinion that three sessions of each of the scientific sections would be somewhat tedious and tend to divide the gathering too much, as well as to scatter the interest. Upon motion by Dr. Hendershott, seconded by Dr. Stevenson, and carried, Council instructed the Executive Secretary to inform the chairman of the medical and surgical sections of this recommendation, and urge that a joint session be held on Thursday morning, as in recent years.

On motion of Dr. Stevenson, seconded by Dr. Carothers and carried, the President of the Association and the chairman of the sections for the subject to be selected for the general orations were authorized to secure the orators. It was also recommended that the orations be on medicine and neurology, but the final selection of the topics was left in the hands of the president and chairman of the program committee.

President Teachnor named the following committee from Council as the Program Committee for the 1921 annual meeting: Drs. Goodman, Updegraff and Haines. Former president E. O.

Smith, of Cincinnati, was appointed general chairman of the local committee on arrangements for the next state meeting by President Teachnor.

Recommendations submitted by the Publication Committee for securing the best possible scientific papers for the section meetings and for publication in *The Journal*, were referred to the Program Committee, with a request for careful consideration and embodiment in the regulations and instructions to be issued to section officers.

Dr. McCampbell, chairman of the Committee on Medical Education, submitted for the consideration of Council a number of recommendations relative to the series of post-graduate lectures during the coming months. He suggested the possibility of securing more than one lecturer to divide the work of delivering addresses before the several group meetings in the various sections of the state. In the general discussion the following subjects were suggested as possible topics for medical education this year: "Routine Physical Diagnosis", "Diagnosis of Cardiac Disorders", "Advantages of History Writing".

Upon motion of Dr. Goodman, seconded and carried, Council recommended to Dr. McCampbell's committee that the subject of "Physical Diagnosis" be adopted for this season's lectures, and authorized Dr. McCampbell's committee to select a speaker or speakers, and in conjunction with the Executive Secretary, to arrange the details for meetings.

Dr. Upham, chairman of the Committee on Public Policy and Legislation, reviewed the activities at the recent A. M. A. meeting in Boston, and particularly the proceedings of the House of Delegates. He stated that policies there adopted indicated that the Ohio State Medical Association had been in the forefront in setting forth methods and activities in organization. He suggested that thought be given during the coming months to the perplexing question of the state's supervision and direction of medical practice, particularly those functions which interfere with private practice without direct benefit to the community at large. Upon motion of Dr. Goodman, seconded and carried, Council complimented and congratulated the Ohio members of the A. M. A. House of Delegates.

In general discussion it developed that in a few communities the local health authorities were really practicing state medicine. Upon motion of Dr. Goodman, seconded and carried, these questions were referred to the Policy Committee with instructions to study the situation and ascertain what practice, proper or improper, of this nature, is being carried on in various localities.

The Executive Secretary reviewed briefly the



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COLUMBUS, OHIO

relations of the Ohio State Medical Association with other allied organizations, including methods of cooperation and effective results thus secured. In the interest of constructive work for the public good, on motion by Dr. Hendershott, seconded Council authorized the appropriation of \$225.00 to the Ohio Public Health Federation.

In considering problems in relation to the medical and nursing professions, Dr. Goodman emphasized the difficulty of securing sufficient nurses for the needs in rural communities. On motion by him, Council instructed the Committee on Public Policy and Legislation to submit a draft of a proposal which would have for its purpose an increased number of nurses with resultant benefit to the sick public. Dr. Platter and Dr. Upham explained the reasons why there had been a delay in the introduction of a nursing bill in the last legislature and in reply to Dr. Goodman's insistence that such a bill be introduced at the next legislative session irrespective of obstacles, Dr. Upham promised on behalf of the Policy Committee to submit a proposal at the next meeting of Council for full consideration.

The following communication to Council from the Ohio Public Health Association was read:

"As you know, the anesthesia question was very much in evidence during the recent session of the Legislature. The legislative struggle that took place on this subject became so intense that it very nearly overshadowed all of the other legislative matters of interest to the medical profession and to those engaged in public health work.

"It has seemed to the Ohio Public Health Association that the whole question has a public health aspect which should be taken into consideration. With this in mind, the Ohio Public Health Association asked the Ohio Hospital Association and the Ohio State Association of Graduate Nurses, at their annual meetings in May, to appoint a special committee of five members which would meet with other committees that we hoped might be appointed with a view to seeing if the entire matter cannot be thrashed out in advance of another meeting of the legislature. Both of these state organizations appointed such committees and these committees are now waiting for the appointment of additional committees by other state associations.

"Our own Association will appoint a committee and I am writing to you to ask if you will not present the matter to your Council with a view to having a committee of five appointed to meet with these other committees that have been appointed by the other state associations.

"In the appointment of the committees, we have sought to avoid the appointments of individuals who have taken an active part in the struggle heretofore. May I suggest that your committee be representative of your membership and yet not representative of your legislative committee or anyone connected with the State Medical Board.

"I trust your Council will take action on this matter as one needing fair and earnest discussion with a view of reaching some basis upon which we can all act together.

Sincerely yours,

(Signed) Robert G. Patterson,
Executive Secretary Ohio
Public Health Association."

During the general discussion following the reading of the foregoing letter, Dr. Stevenson declared that there was a tendency on the part of some nurses to practice medicine rather than to confine their activities to the authorized field. Dr. Brush stated the unqualified opposition of the physicians of the Eighth Councilor District to nurse anesthetists. He submitted communications which urged *The Journal* to give as much space to the opponents of nurse anesthesia as was given to the published report of the special committee on anesthesia in the April issue. It was pointed out that the official action of the House of Delegates, and of various constituent societies had been published in various issues of *The Journal* comprise considerably more space than had been given to the report of the special anesthesia committee.

Dr. Goodman moved that the suggestions contained in the letter from the Ohio Public Health Association be complied with, and that a committee of five be appointed to confer with similar committees from other groups interested in the general problems of health and anesthesia. This committee will also consider the matter of providing nurses for rural communities.

President Teachnor called Ex-President Lukens to the chair, and read the statement printed on Page 532.

After further discussion the previous question was moved, and the motion of Dr. Goodman to appoint a committee of five was carried.

On motion of Dr. Goodman, seconded and carried, Council voted an expression of approval to the President for his statement, and authorized the reference of his declaration to the special committee provided for in the previous motion, and instructed that such declaration be published.

A detailed membership statement was submitted which shows a total annual membership to date of 4,800 as compared with 4,678 on the same date in 1920.

Following a discussion in which the general problem of membership and harmonious interest among members of the profession were thoroughly discussed, Dr. Carothers moved, seconded by Dr. Hendershott and carried, the acceptance by the Executive Secretary of pro-rated dues for new members from July 1 to the end of the year of \$3.00, and for new members from October 1 to the end of the year, \$2.00.

Following an analysis and general discussion of economic subjects including the operation of the new administrative reorganization code and the general economic outlook and its influence on medical practice as well as the desirability of more interest by physicians in civic and public matters, recommendations by the Publication Committee for increased value of *The Journal* to the members were accepted with approval.

A summary of the situation on medical defense submitted by the Executive Secretary follows:

Atophan

TRADE MARK



Migraine, Hemicrania, Eyestrain, etc., are all just "Headache" to the patient, and speedy relief is clamored for. But the physician regards "Headache" only as a symptom and wants time to find the underlying cause.

Information, Literature and Ample Trial Quantity from

Atophan is doubly valuable and efficient in these and other forms of "retention" headaches, because of its typical stimulation of the uric acid excretion, and its remarkably prompt and innocuous, analgesic and decongestive action.

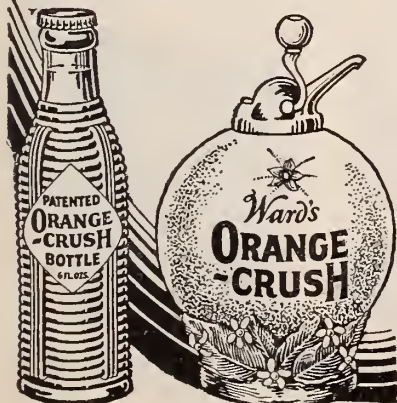
SCHERING & GLATZ, INC.
150 Maiden Lane, New York

"HEADACHES"

(Migraine, Hemicrania, Eye-Strain, Etc.)

Ward's ORANGE-CRUSH LEMON-CRUSH and LIME-CRUSH

*Dependable
Drinks*



SO well-known and well-liked are the "Crushes" that information regarding these drinks should be most interesting to the medical profession. Orange-Crush, Lemon-Crush and Lime-Crush are compounds of fruit oils, fruit juices and citric acid from oranges, lemons or limes, purest sugar and carbonated water. They are guaranteed under all pure food laws, Federal and State.

To make sure that always and everywhere the "Crushes" will be right, there is maintained at Orange-Crush Company's plant a Service Laboratory, modernly equipped, manned by trained chemists. These chemists select all ingredients, direct all production and actively co-operate with bottlers and dealers—to keep the quality of the "Crushes" always up to par. This service pays. It is evidenced by the public's good will toward the "Crushes."

No medical claims are made. Orange-Crush is not offered as an antiscorbutic in infant-feeding. But where wholesome, cooling drinks are desired, our claim is that the "Crushes" are without equal. These drinks are sold in bottles and dispensed at fountains in all principal towns and cities. We will gladly furnish physicians with information regarding the "Crushes." All correspondence will get prompt attention.

Orange-Crush Company Plant and Laboratories,
Chicago

Research Laboratories, Los Angeles

In Canada: Orange-Crush Bottling Co., Ltd., Winnipeg

"On January 1, 1921, our general counsel were conducting defense in six malpractice actions. Since that date one of these suits was favorably terminated for the defendant physician. Another resulted in a verdict in favor of the physician but when carried to the court of appeals the judgment of the lower court was reversed and new trial ordered. Since January 1, 1921, twelve additional suits and three threats of suit have been referred to the Association. Of these, defense in four is being conducted by the Association; defense in two was withheld because of delinquency in membership dues; and defense in six is being handled by private indemnity companies with the cooperation of the Association."

Following a discussion on the increased number of damage suits, on motion by Dr. Goodman, seconded and carried, authorization was made for the publication in pamphlet form of a syllabus on medical defense, based on a report of the Medical Defense Committee, and the paper by Attorney Leroy Eastman, delivered at the last annual meeting.

Attention was called to the report of the special committee on the President's address adopted by the House of Delegates at the last annual meeting, instructing Council to take under consideration the proposal for a bureau of publicity. On motion of Dr. Goodman, seconded and carried, Council authorized the appointment by the President of a committee of three to study this proposal.

On motion of Dr. Goodman, seconded and carried, the question of a field secretary was also referred to this committee for consideration, with request that such committee report to Council.

President Teachnor announced the appointment of the following committee to study both proposals: Drs. Haines, Brush and Goodman.

A report was submitted to Council on the status of the decision rendered by the Supreme Court upholding the medical practice laws (published in *The Journal*, June, 1921) and the further delay was explained by the case being carried to the Supreme Court of the United States.

On motion of Dr. Carothers, Council adjourned to meet on Sunday, October 2, 1921, in Parlor A, Deshler Hotel, at 1:30 P. M.

S. J. Goodman, M. D.
Secretary of Council.

Nurses Urged to Take Teacher-Training

The College of Education at Ohio State University in July sent a communication to all registered nurses calling attention to the demand for specially prepared nurses as instructors in training schools for nurses. Teacher-training courses have been announced by the college, with classes to be conducted at the university and observation and practice work in the hospitals in and about Columbus.

CONVENIENT

A Complete Food

Requires Neither Cooking
Nor the Addition of Milk

"Horlick's"

The Original Malted Milk

Obviates many of the difficulties that are generally connected with the prescribed feeding of infants.

Easily prepared to meet the changing needs of the individual infant.

Very reliable—prescribed by the medical profession for over one-third of a century.

Avoid Imitations

Samples and Printed Matter Prepaid

HORLICK'S - - Racine, Wis.

Do you believe that the fitting of trusses is a part of the Practice of Medicine?
If so, send your patients needing trusses to

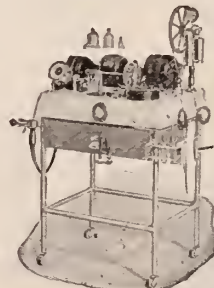
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Elastic Stockings Made to Measure
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The McINTOSH UNIVERSALMODE



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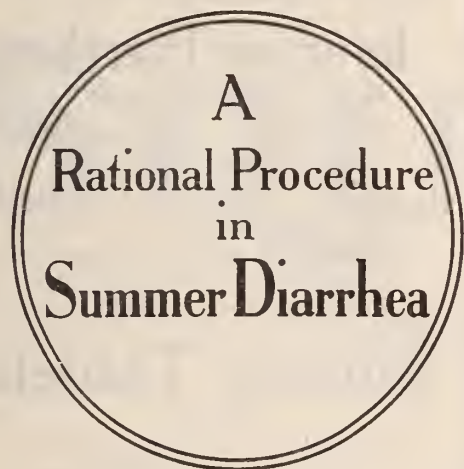
Galvanic, Faradic, Slow Sinusoidal, Rapid Sinusoidal currents, Cautery, Diagnostic Light, Mechanical Vibration, and Air Modalities.

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Main Office & Factory: McIntosh
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Chicago, Ill.



For Infants of any age

Mellin's Food

4 level tablespoonfuls

Water (boiled, then cooled)

16 fluid ounces

Give one to three ounces every hour or two, according to the age of the baby, continuing until stools lessen in number and improve in character.

Milk, preferably skimmed, may then be substituted for water—one ounce each day—until regular proportions of milk and water, adapted to the age of the baby, are reached.

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Get in touch with either of them when you are in need of anything in pharmaceutical supplies. High Quality and Prompt Service are assured.



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WE SELL ONLY
TO PHYSICIANS

OHIO PUBLIC HEALTH NOTES

In a series of four child health conferences conducted in Troy recently under the auspices of the Red Cross and the Altrurian Club, a total of 172 children of pre-school age were examined. Each clinic was in charge of a group of three local physicians, and so successful was the work considered that establishment of a permanent child welfare station is under consideration.

—Eight positions in the Akron city health department have been abolished at the suggestion of Health Commissioner D. D. Shira, who estimates therefrom a saving to the city of \$12,780. The new program eliminates the following offices and provides for the performance of their duties by other department employees: private secretary to health commissioner; one clerk in the communicable disease division; two field clerks; city bacteriologist; one sanitary policeman; director of the sanitary division; and assistant superintendent of the communicable disease hospital.

—The Canton health board has combined the positions of chief medical officer and city health commissioner and temporarily selected Dr. William K. Murray, former chief medical officer, to fill both offices at a salary of \$3,800 per year. Dr. Murray succeeds Dr. John A. Kappelman, resigned. Dr. F. M. Sayre, who was formerly in charge of the laboratory work of the health department, has been named deputy chief medical officer on a part-time basis.

—"Better babies" is the slogan of the Niles' baby clinic, inaugurated recently for babies under 18 months of age. Dr. W. F. Gessler is in charge of the clinic and organizations backing it are the Red Cross, Public Health League and Federation of Women's Clubs.

—Closing his term on the Cincinnati Police Court bench for the year 1921, Judge Yeatman declared that cases coming through that court indicate need of an institution for the feeble-minded in Cincinnati. It is his opinion that many offenders should have hospital treatment rather than punishment for their shortcomings. Facilities for the segregation of habitual offenders and first offenders would help the situation, as would an industrial institution with farm facilities, Judge Yeatman believes.

—A clinic for the crippled children of Tuscarawas County was held June 29, with sessions at Dover in the morning and New Philadelphia in the afternoon. The clinic was one of the series which has been held in different parts of the state by the Ohio Society for Crippled Children of the Rotary Clubs, the Red Cross, State Department of Health, State Medical Association and other agencies.

The Plague of Summer!

Infantile Diarrhea

(Of Bacterial Origin)

Treatment by the ingestion
of the

BULGARIAN BACILLI

Has been growing in favor during the last eleven years, evidenced by the constantly increasing demand for

Bulgara Tablets

H. W. & D.

A most convenient and reliable form for administering Bulgarian Bacilli.

Literature, including bacteriologic reports, and sample furnished upon request

Hynson, Westcott & Dunning

BALTIMORE

We are now manufacturing

SILVER-SALVARSAN

(The sodium salt of silver-diamino-dihydroxy-arsenobenzene)

This has been used with success in Europe for more than two years past. Silver-Salvarsan is in clinical use in the following New York hospitals and clinics:

Vanderbilt Clinic . (Service of Dr. Fordyce)
Skin and Cancer . (Service of Dr. Stetson)
Bellevue . . (Service of Dr. Parounagian)
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The physicians who are administering the product are well satisfied with the results obtained. Silver-Salvarsan effects a more rapid disappearance of the contagious lesions than the other forms of Salvarsan and practically no reaction follows its administration.

SILVER-SALVARSAN is now ready for general distribution to the medical profession.

HAMETZ LABORATORIES, Inc.
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THYROXIN SQUIBB

The chemically pure, physiologically active constituent of the thyroid gland, introduced by Kendall and made by E. R. SQUIBB & SONS under license of the University of Minnesota. Possesses all the activity of desiccated thyroid and offers the advantage of accuracy in dosage and therapeutic effect. Marketed in tablets of 1/320, 1/160, 1/80, and 1/32 grain each for administration by mouth. Crystalline Thyroxin for intravenous use is supplied in vials of 10 milligrammes to 100 milligrammes.

NOW READY FOR DISTRIBUTION.

SEASONABLE BIOLOGICALS

ANTIPNEUMOCOCCIC SERUM SQUIBB

Type 'I'

DIPHTHERIA ANTITOXIN SQUIBB

(Small in Bulk—Low in Solids)

LEUCOCYTE EXTRACT SQUIBB

(An adjunct to Serum and Vaccine Therapy)

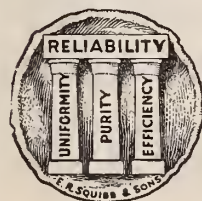
SMALLPOX VACCINE SQUIBB

(In Capillary Tubes)

THROMBOPLASTIN SQUIBB

(Physiologic Hemostatic)

(Local and Hypodermic)



For almost three-quarters of a century this seal has been justly accepted as a guaranty of trustworthiness.

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MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

Treat Hay Fever With Suprarenalin



SUPRARENALIN is the remedy in Hay Fever. It may be administered locally, internally or Hypodermatically.

Locally—Solution and ointment are applied to affected parts.

Internally—Solution should be given, so that the patient will get from 1/70 to 1/10 of a grain; the dose repeated in from 10 minutes to 2 hours, according to effects.

(Let the patient hold Suprarenalin in the mouth for awhile, as the best systemic effects are got by absorption through the membranes.)

Hypodermatically—Suprarenalin Solution is injected into the arm or neck.

Suprarenalin is recommended in Hay Fever in various forms. Herewith are suggestions made by men of authority.

One recommends using solutions of varying strengths from 1:10,000 to 1:1000 made up with normal salt solution. To sustain the relief to some extent, he suggests spraying over the constricted mucous membrane a 5 grain to the ounce solution of menthol in albolene, benzoinol or other light oil.

Another uses Suprarenalin Solution in strengths varying from 1:10,000 to 1:1000, applying these locally to the conjunctiva and nasal membranes. He also suggests the following combinations which are snuffed into the nasal passages or insufflated by means of a nasal blower.

- | | |
|-------------------------------|-----------|
| 1. Suprarenalin | 1 part |
| Zinc Stearate (Comp) | 100 parts |
| Heavy Magnesium Carbonate | 900 parts |
| Mix Triturate well. | |
| 2. Suprarenalin | 1 part |
| Zinc Oxide | 100 parts |
| Bismuth subcarbonate | 400 parts |
| Mix Triturate well. | |
| 3. Suprarenal gland substance | 1 part |
| Zinc Stearate | 20 parts |
| Zinc Oxide | 80 parts |
| Mix Triturate well. | |
| 4. Suprarenalin | 1 part |
| Bismuth subcarbonate | 300 parts |
| Zinc Oxide | 300 parts |
| Zinc Stearate | 200 parts |
| Mix Triturate well. | |

A prominent nose and throat specialist recommends:

	gm.	15 or grs.	iiss
Cocaine hydrochloridi	15	or grs.	iiss
Sodii boratis	30	or grs.	v-
Suprarenalin Sol. (1:100)	4	or 5	i
Glycerine	2	or 5	ss-
Aqua Camphorae ad.	30	or 5	i

M. Sig. Use as a spray to the nose four or five times daily or oftener if needed.

Suprarenalin Solution 1:1000 (Armour) is stable, uniform, non-irritating and is free from chemical preservatives. Literature to Physicians.

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The Rocky Glen Sanatorium

McCONNELLSVILLE, OHIO

A private institution for the treatment of
Pulmonary Tuberculosis
and Laryngial

The sanatorium is located at McConnellsville, Ohio (a town of 3000) upon a beautiful high hill, with picturesque surroundings, and a pleasant environment. It is built on the cottage plan, (each patient having either an individual cottage or a cottage with a sleeping porch for two) and equipped for the scientific diagnosis and treatment of pulmonary and laryngeal tuberculosis.

The cottages have all modern conveniences, such as individual call bells, hot and cold running water in each cottage, electric lights, and a very adequate supply of furniture.

Climate means nothing in the treatment of pulmonary tuberculosis, so why send your patients west? The climate in Ohio is as good as any. The cardinal points of REST, FRESH AIR, PROPER FOOD, AND REGULATED EXERCISE is the method of treatment used.

CLOSE PERSONAL ATTENTION IS THE MOTTO OF THE INSTITUTION.

Success in the treatment depends upon the stage of the disease at which the patient is admitted to the institution. The sanatorium acts as a "school" where patients are taught to live properly and to protect others. They also learn the value of rest. By giving your patient a short period of "schooling" he will be better prepared to follow instructions and will have increased his chances of arrestment of his disease.

When in doubt as to diagnosis, we will admit the case for observation and report.

COMPLETE X-RAY DEPARTMENT AND LABORATORY.

ARTIFICIAL PNEUMOTHORAX TREATMENT AND TUBERCULIN WHEN INDICATED.

RATES, \$28.00 per week, which includes everything except an X-ray examination, which is made on admission.

Descriptive circular and other information on request.

Inquire of

DR. LOUIS MARK, Medical Director, Rocky Glen Sanatorium, McConnellsville, Ohio

MEDICAL ECONOMICS

PUBLIC HEALTH - SOCIAL WELFARE *and* ORGANIZATION PROBLEMS
WITH EDITORIAL COMMENT *by* D. K. M.

This—Your Journal

While realizing that the function of *The Journal* as the official medium of expression and disseminator of information does not require any particular style in appearance, the Publication Committee believes quite properly that *The Journal* can be made more attractive without detracting from its functions and service to its readers. Pursuant to this thought, *The Journal* this month has a new design for its title page, and new and more attractive departmental headings.

In addition to the scientific pages, *The Journal* will continue to devote much space to news of interest, to economic and social problems and developments; to pending legislation, new governmental and state regulations, and other matters of direct interest to the individual practitioner and to the medical profession as a group.

The new heading for the editorial section does not mean a departure in policy, but it is the hope of the Publication Committee to retain the interest and cooperation of the membership in securing a more general discussion on those matters of common interest. With your assistance it is the hope of the Committee from time to time to publish articles on business methods in medical practice; on hospital administration or the relation of the general profession to the hospital and the public; discussion on social and economic philosophy; on the relationship between consultant and private practitioner; on plans of group diagnosis and practice; on centralized effort; business or firm arrangements and results, and kindred subjects of direct interest to every physician in Ohio.

Medical Publicity and Health Instruction

In planning for the work of the coming year, the State Department of Education recommends that special emphasis be laid on a health program.

The official publication of the Ohio State Department of Education in its issue just prior to the opening of a new school year devotes considerable space to an outline of instruction for the promotion of "health for the child." With so much discussion at the present time on the question of professional advertising, with campaigns of publicity under way by various organized professional groups, it is encouraging

to observe the comprehensive plans for proper health instruction in Ohio's schools.

The writer has frequently contended that such a program would accomplish much greater results than any other one method in educating the public in primary health matters and toward a more thorough discrimination among schools of practitioners with the result of a greater appreciation for thorough and scientific medical methods.

This movement in conjunction with the activity of local health leagues being promoted by the Ohio Public Health Association and with the educational efforts of the State Department of Health, with the cooperation and assistance of the medical profession, should accomplish much in the right direction.

In emphasizing the health program, the Department of Education points out that one of the most effective methods is to make health attractive and desirable to children, and to link each health habit with a story that will fix it in the mind of the child and make it function. The Department expects to issue early in the fall a course of study in hygiene and health which will contain many absorbing health stories and will abound in practical and helpful suggestions. The work is arranged by grades from one to eight.

The modern conception in public instruction realizes the component elements in child development—physical, mental and spiritual. The seven objectives which stated in the relative order of their importance are: First health. Second, command of fundamental processes. Third, worthy home membership. Fourth, vocation. Fifth, citizenship. Sixth, worthy use of leisure. Seventh, ethical character.

The health program in education as outlined in Ohio does not attempt to supersede or supplant any of the functions of the public health official or the physician in private practice. In fact, the syllabus and outline for health instruction emphasizes the need for frequent and thorough physical examinations and the consultation of physicians for even slight apparent physical disorders.

Judging by the attitude of the educational authorities the program as a whole is wholesome, practical and instructive. In fact in an article in the last issue of the *Better Schools Bulletin*, issued by the State Department, the proper spirit

is expressed in the following headings and sub-headings: "Basing High School Programs on Faith is Wrong"; "Health, Vocation, Home, Citizenship, Leisure and Character are Ohio Goals Deserving Wide Acceptance"; "Vital Objectives Instead of Faith Aims."

Prohibition Astigmatized

The old parable of "straining at a gnat and swallowing a camel" illustrates the futile and disproportionate efforts in some of the modern-day movements.

We are all aware of the over-emphasis placed by prohibition enforcement officials on the violation by physicians of prohibition laws and regulations. In spite of the fact that less than one doctor in a thousand even violated the spirit of these regulations, much was said and written on both the shortcomings and the responsibilities of the medical profession on the whole question of prohibition.

In view of that situation, recent discoveries may account for the many months of silence by some officials on the methods of the gigantic operations of the so-called "whiskey ring" in America. It is not difficult to believe that \$150,000,000 has been made through the illicit traffic in intoxicants during the past year. Federal agents have now begun to unmask an immense combine centering in Ohio and Illinois in which flavoring extract and patent medicine business has been used as a "screen."

Added to the huge quantities of intoxicants removed from store houses on forged permits is found the withdrawal from bonded warehouses of ethyl alcohol, whisky, brandy and other spirits for commercial use in suspiciously large quantities.

These concerns supposedly were operating separately but the government suspected collusion and on holding up applications for new withdrawals for several of these companies, it was found that their operations were directed by one group represented by the same attorneys. Some concerns apparently operating on a large scale were found to have no factories at all, but withdrawals even in quantities of barrels and car loads was being wholesaled to retail bootleggers.

The fake flavoring extract combine which has been "discovered" in Ohio and Illinois was an even bigger and shrewder enterprise for outwitting the law. Its sales territory embraced the whole Middle West, and it guarded itself cunningly against criminal prosecutions.

Legitimate flavoring extracts nearly always contain a high percentage of alcohol, but other ingredients make them highly undesirable as beverages.

Obviously, if a scheme could be devised to make flavoring extracts with the high percentage of alcohol, still pleasantly palatable for beverage

purposes—and the law, at the same time, hoodwinked or evaded—enormous profits could be realized.

Certain unscrupulous extract men, amply supplied with money, credit and machinery, conceived the happy idea of manufacturing a flavoring extract that would be pleasant to drink and that would produce intoxication—and then naming it after favorite kinds of liquors—apricot extract, rum extract, cognac extract, rye extract, champagne extract, &c.

These "flavorings" they soon began to manufacture in huge quantities, obtaining their alcohol and whisky, under permit, direct from government bonded warehouses.

The labels on the manufactured articles, shrewdly worded, apparently protected them. Ostensibly the "extract" was to be used to flavor puddings, pies and desserts.

Brazenly and openly they put their salesmen on the road. Groceries, pool-rooms, cigar stores, delicatessen shops and general stores throughout the whole Middle West were stocked and exposed the beverage openly on their shelves for sale.

Outwardly the business and the product both were legitimate. But when a salesman interviewed a storekeeper, a whispered "aside" would put the latter "wise" to the possibilities of this new extract, and the word would be passed on quietly to retail customers.

Presently the demand for these "extracts" became so great that the manufacturers began to ship them in barrels, jugs and flagons.

Any grocer could buy a barrel of "apricot extract" knowing that what he bought in reality was a barrel of synthetic apricot brandy, and dispense it at high prices without much risk.

These cases are typical of the devious and widespread methods which unscrupulous men engaged in "big business" are said to be using to defy or circumvent the prohibition law on a wholesale scale.

In view of such a situation the medical profession is certainly justified in being incensed at the unfair reflection cast upon it in relation to the improper use of intoxicants. Entirely aside from the federal red tape and restrictions, and aside from the question of whether or not the medical profession should be its own judge in prescribing what it considers best, it would seem that a solution of the unlawful liquor traffic is not found in constantly harrassing a profession whose relation with the question of prohibition enforcement is incidental at best, and which is already circumscribed by sufficient and even burdensome formalities.

Ohio the Mecca of Health Workers

During the next two months Ohio will be a center of interest for public health and welfare workers throughout the country. In September and October there will be four big events of

special interest to physicians. The first of these will be the second annual conference of health commissioners of Ohio with the State Department of Health in Columbus, September 12-16. During the same period, and extending from September 12-14, the Mississippi Valley Tuberculosis Conference will convene in Columbus for its ninth annual meeting. On October 4-8 Columbus will be the site of the first national meeting of the American Red Cross. The scene next shifts to Cincinnati, where an elaborate Health Exposition is scheduled to take place, October 15-22. Details of the programs of all these gatherings will be found elsewhere in this issue.

Your Position in The Cycle

While it is foolish to become pessimistic, it is wise to recognize existing conditions. The industrial situation and the meager crops this session may produce a "hard winter." We are just in the middle of the cycle of "inflation, depression then innovation."

From radicals will come a flood of proposals to solve the economic and social ills. As for such panacea, "there ain't no such animal."

The point is this. We must keep our feet on the ground and above all eliminate whatever if any dissention exists in the profession. "Harmony, cooperation and cohesive organization" in local societies and the State Medical Association are not mere by-words, but an actual necessity.

It is unfortunate that the return to normalcy could not have been through a universal readjustment. However, some lines of business have been "pinched" harder than others. There probably will be considerable unemployment at least until next Spring. This condition will mean tight money and poor collections. All these matters cannot help but affect the physician, who usually is the last creditor paid. While having in mind the humanitarian duties incident to his special calling, the physician cannot properly serve unless adequately, remunerated. Fair and just though not exorbitant fees must not only be charged to those who can pay, *but these fees must be collected*. Complete records, strict business methods and monthly statements as a part of the usual routine may not only be your salvation, but a proper protection to you in your service to your community.

"Better Babies" Legislation

With the enactment by the United States Senate of the Sheppard-Towner maternity bill by the overwhelming vote of 63 to 7, a further step was taken toward the appropriation of \$480,000 to be apportioned \$10,000 to each of the states. One million dollars also is provided for the current fiscal year to be apportioned among the

states in the proportion which their population bears to the population of the country.

This apportionment is to be based upon the condition that the state appropriates an amount equal to that allotted to it.

Senator George H. Moses, of New Hampshire, Republican, presented an amendment proposing to transfer the administration of the bill from the Secretary of Labor to the Secretary of the Treasury, but the Senate decided that finance had nothing to do with motherhood and infancy, and voted it down, 61 to 9.

Three Republicans and four Democrats joined in voting against the bill on the final roll call. The Republicans were Borah, Idaho; Moses, New Hampshire, and Warren, Wyoming; the Democrats, Broussard, Louisiana; King, Utah; Reed, Missouri, and Watson, Georgia.

When the result had been announced Senator James A. Reed, one of the bitterest foes of the measure, offered an amendment to change its title to read:

"A bill to establish a board of spinsters to teach the mothers of the United States how to raise babies."

This legislation which had many enthusiastic proponents and numerous bitter opponents, is in the nature of an experiment. The sentiment in its favor largely created through welfare organizations and women's groups, received support in spite of many logical objections to the measure.

Federal—State—Medical Problems

One of the most interesting formal statements made before the Committee on Interstate and Foreign Commerce of the House of Representatives in opposition to the Sheppard-Towner maternity bill was that of Dr. Charles E. Humiston, president of the Illinois State Medical Society, and which is interesting not so much as applying to this particular bill, but in its broader aspects and principles, especially the problem of federal—state aid in health matters.

An outline and summary of his arguments were:

1. The principle of federal state aid as a means of financing public health activities, is financially and economically unsound, and is unfair and unjust as a method of taxation.

2. With the exception of those activities which are clearly national in character, such as quarantine and the regulation of interstate commerce, etc., public health work is a function of the state and local governments and should be paid out of state and local funds and directed by state and local officials. The furnishing of instruction or care to mothers or any other persons needing such instruction is just as much a function of local government as is the providing of food and clothing for the destitute. The assumption and exercise of these functions by the Federal Government is an invasion of the legitimate activities of the state.

3. The claims of the advocates of this measure

that the present situation regarding the care of mothers and infants constitutes an emergency; that the United States stands 17th in the list of civilized nations in maternal mortality and that the bill has the unanimous support of the women of the United States are based on insufficient and inconclusive evidence and cannot be substantiated.

4. Whatever need exists for the education of mothers regarding care at the time of child birth is being supplied by educational material distributed in large quantities by state and local health departments and by voluntary organizations.

5. The means provided in the bill will not afford any effective remedy for existing conditions.

6. The distribution of federal funds to state health organizations will inevitably lead to the domination and dictation of state activities by the Children's Bureau.

7. The ability of the Children's Bureau to dictate and largely control the appointment of the head of the Children's Bureau in each state as well as all of the public health nurses, district superintendents and others will result in the organization of a large body of salaried employes appointed and largely paid by a federal bureau, yet working under a state department of which they are, to a large extent, independent. Such a condition will produce friction and confusion in public health work and will make possible the development of a political machine under the control of the Children's Bureau.

8. The problem of reducing maternal and infant death rates, is largely a medical problem. The passage of this measure would put the control of instruction in the different states in the hands of a body of public health nurses working under lay direction and entirely independent of medical control.

9. Whatever federal activities are necessary or desirable in the public health field should be under the control of the United States Public Health Service rather than under a bureau of the Department of Labor. While this general principle has always deserved consideration, it is of especial importance at present when Congress has created a joint commission for the purpose of co-ordinating and rearranging the executive activities of the Federal Government, for the securing of better and more economical administration. The passage of this bill would place in the hands of the Department of Labor an important health activity which belongs to the United States Public Health Service and would still further increase the confusion which now exists and which the Congressional Commission appointed under the Smoot-Reavis Resolution was intended to remedy.

Menace of Underpaid Service

With many vacancies now in the staffs of various state hospitals, which it is impossible to fill because of the inadequate salaries paid by the state, Ohio faces a serious situation in caring for her wards, according to Public Welfare Director MacAyeal. Representatives of the Association of Assisting Physicians of Ohio State Hospitals recently conferred with the Director of Welfare and requested that steps be taken to increase the salary schedule.

They pointed out that while Ohio is paying salaries as low as any paid in America, the population of the institutions is increasing and the

work and duties of the assistant physicians are multiplying. Vacancies exist on almost every staff because of the inability of the state to get competent physicians at the salaries offered. Many physicians who have applied for positions on the staffs of various state hospitals have later declined opportunities to fill vacancies on learning of the inadequacy of pay offered.

The salary schedule for assistant physicians of Ohio state hospitals ranges from \$1200 to \$1800, whereas, it is pointed out, that the scale for Michigan is \$1800 to \$3800; Pennsylvania, \$1500 to \$2700, and many other states pay similar rates. Unless the present scale for Ohio is increased the state will lose the services of many of her best physicians. Realizing the menace of this, the managing officers of the various hospitals are favorable to a substantial increase in the salaries of the hospital physicians.

This situation is of direct concern to every physician in Ohio. The attitude of the public toward medical service and the value placed on such service by the state is the basis of appreciation or lack of appreciation toward the physician, whether he be engaged in private practice or is an employe of the government. Every physician can help in seeing that the state places a higher valuation on medical services.

Occupational Disease Law Now Effective

Because of the rather involved nature of the procedure in the Industrial Commission under the new occupational disease law which became effective last month, the exact system for reports and claims had not been completely worked out late in August when this was written.

It will be remembered that the law was analyzed in the July issue of *The Journal* on page 487, and that additional information was carried in the August issue on page 531. As previously stated, the new law requires the reporting of diseases enumerated in the law to the Industrial Commission within 48 hours after being diagnosed as such by a physician. The requirement for reporting occupational disease (*non compensable*) to the State Department of Health is still in effect, but the office of the State Medical Association in cooperation with representatives from other interested groups, has been endeavoring to simplify the procedure so that physicians will not be compelled to make two separate reports, one to the Industrial Commission and the other to the State Department of Health. It is expected that report blanks will be formulated in duplicate to be sent to either one or the other of state departments.

For those diseases which are *compensable* and from which arise claims for medical service as well as claims to the employe under the new provision added to the Workmen's Compensation law, a report to the Industrial Commission from

(Continued on page 635)

Ruptured Gastric Ulcer: With Case Reports*

CHARLES T. SOUTHER, M.D., F. A. C. S., Cincinnati

Editor's Note.—Dr. Souther relies on the following diagnostic symptoms of ruptured gastric ulcer, pain, shock, rigidity and vomiting. All are characteristic in this condition and enable the internist and surgeon to differentiate this condition from acute appendicitis, hemorrhagic pancreatitis, mesenteric thrombosis with gangrene of the intestines, ruptured gall-bladder and other acute injuries of the abdomen. Acute cases get well or die depending on how early they are operated. A certain per cent. of chronic slow perforating ulcers will heal spontaneously. Medicines or food by mouth should never be given in any suspected case. Only morphine for pain by hypo is advisable. Patients should not be transported great distances after rupture. The surgeon had best go to the patient. Surgical treatment, as a life-saving measure must be instituted early and need only consist in opening the abdomen, closing the perforation and putting a patch of omentum over the area and suturing it to the surrounding area of stomach; closing the abdomen above and putting in a rubber drainage tube supra-pubically. Gastro-enterostomy may be done within 12 hours after perforation. Later it should be a second stage operation.

THERE is probably no more perfect example of the *acute surgical abdomen* than found in perforating gastric or duodenal ulcer.

DIAGNOSIS

1. Take a very careful history as to previous stomach conditions (this is only possible after the pain has been relieved).

2. Onset is very sudden; the patient is frequently almost knocked down by the sudden severe pain in the upper abdomen.

3. Peritonitis develops so rapidly and is so largely of a chemical type that adhesions do not have time to form early. This justifies us in assuming that some acute peritoneal disaster is present.

The proportionate incidence of the several varieties and their location may be charted as follows:—

Varieties	Location	Duodenal 1.
		Stomach 2.
	Stomach	Anterior wall 6.
		Posterior wall 1.
	Character	Acute.
		Sub-acute.
		Chronic and Large and Small.

Sargent, in 1904, reported a chart, from St. Thomas Hospital in London, showing the site of perforation in 77 cases of ulcer in which 11 were on the posterior surface and 66 on the anterior surface of the stomach.

While *ulcer* occurs more frequently on the posterior wall, perforation is more frequent on the anterior wall, in a proportion of six to one.

Frequency of rupture in cases of gastric ulcer is variously estimated at from 6 to 28 per cent. in all cases. This seems very *high*. In 20 per cent. of the recorded cases the perforations were multiple.

AGE AND SEX

Cases are recorded in Keen's Surgery with ages ranging from an infant 45 hours old to extreme old age. Perforation in childhood is rare. Twenty to 50 years is the most common age. I have seen one case, not here reported, at the age of 72, on which I operated with a fatal outcome.

SYMPTOMS

The diagnostic symptoms are:—

1. Pain.
2. Shock.
3. Rigidity.
4. Vomiting.

Pain is always present, very sudden in onset and very severe in character. It is located in the upper abdomen at the beginning and as gastric contents escape and pass down the right side the *pain area* increases and includes the appendix region and then passes into the pelvis. The paroxysmal character of pain corresponds to the activity of the stomach which throws out more stomach contents with each peristaltic wave. Patient may have intervals of **freedom from pain** when the volume of material escaping the stomach is small and of a less irritating character. When seen early (first hour) the pain is so great that two or three hypodermics of 1/4 grain morphia may be necessary to secure relief; and even then pain recurs with each fresh escape of contents into the peritoneal cavity.

Shock is a very prominent symptom in all cases seen within the first hour, and is mild or severe depending on the amount and suddenness of the escape of fluids or stomach contents into the peritoneal cavity.

Anxious expression, cold clammy sweat, pallor, small thready pulse, great thirst, and even dilated pupils may be present. Shock may be so great that the patient, while at work, may be almost knocked down or fall at time of rupture.

Rigidity of Abdomen. I know of no other condition that will produce the very marked board-like rigidity found in perforated gastric or duodenal ulcer. It appears in the right upper quadrant first, gradually spreading in a few hours

*Read before the Surgical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

over, first the right lower quadrant and then the left upper and lower quadrant. Following the first muscular splinting by the abdominal wall we have a gradual change to the general peritonitis rigidity with some distention.

Distention. The first 3 hours after rupture there is usually present a tendency to the scaphoid or retracted abdomen. Later distention begins due to the escape of gas from the perforation with loss of liver dullness. After 24 hours the distention incident to peritonitis is manifest. From this point on we have the symptoms of ruptured ulcer and peritonitis as they pertain to distention.

Vomiting may or may not be present and is only a prominent symptom when the stomach contains a large quantity of food or contents. Later we get the characteristic vomiting of general peritonitis when the case is allowed to reach that late stage.

OTHER SIGNS—TEMPERATURE, PULSE, RESPIRATION AND BLOOD CONTENT

Temperature. At once there is subnormal temperature with shock. After 3 hours the temperature gets up to and a little above normal, provided the patient has reacted from his shock. From here on the temperature is in proportion to the degree of peritonitis present. After 48 hours it usually gets *high*. The temperature falls almost at once following closure of the ulcer with drainage of the lower abdomen in the mid-line.

Pulse. At once after rupture there is small, rapid and thready pulse and is common in all intra-peritoneal disasters. The pulse recovers as shock is controlled and is good or bad in proportion to the degree and extent of peritonitis present and its character, after the first 6 hours, is a good index to the seriousness of the case.

Respiration is almost always quick, jerky and shallow when observed in the first 1 or 2 hours. In any case where the ulcer is leaking freely it is impossible for the patient to take a full inspiration until after large doses of morphine have been given.

Later the variations in respiration are those characteristic of varying degrees of peritonitis.

Blood Count. This is of no value in the first 3 hours. After 6 hours we get some increase in the leucocyte count. If made at the end of 24 hours we may hope to get some confirmatory evidence from the blood count. In the very small rupture with a tendency to spontaneous closure the blood count would be of some assistance in diagnosis.

DIFFERENTIAL DIAGNOSIS

In order to make a differential diagnosis it is necessary to be able to recognize the disease in question, and tell how and where it differs from all the conditions it resembles.

Ulcer is to be differentiated from—

1. Appendicitis, a most similar condition.

2. Acute hemorrhagic pancreatitis.
3. Ruptured gall-bladder.
4. Acute mesenteric thrombosis with gangrene of the intestines.
5. Acute injuries of the abdomen in which even the injury might cause the ulcer to rupture.

Appendicitis can usually be differentiated by the difference in the character of the pain; the final location of pain and rigidity in the right lower quadrant being most marked. Absence of stomach odor and presence of colon bacillus odor on opening the abdomen.

Acute hemorrhagic pancreatitis differs very slightly and the most constant point is that rigidity does not occur at once in pancreatitis and liver dullness is not obliterated.

Ruptured gall bladder pain is less severe, the rigidity less marked, the previous history varies, and jaundice appears early. There is no gas free in the abdominal cavity.

Acute injuries simulating perforated ulcer can only be differentiated by the available history of the case or only by opening the abdomen.

Acute mesenteric thrombosis presents a mass that can be felt early. Rigidity is not marked. Pain is constant but not severe. The whole process is much slower. Liver dullness is not lost as in ruptured ulcer.

PROGNOSIS

A certain per cent. of chronic slow perforating ulcers will heal spontaneously. Acute cases get well or die depending on how early they are operated.

This is shown in the result of Mayo, Robson and Moynihan, (*Diseases of the Stomach, Second Edition*), reporting 133 operated cases with a mortality as follows:

Cases	Time	Recovered
49	Under 12 hours.....	28%
33	12 to 24 hours.....	63%
16	24 to 36 hours.....	87%
33	Over 48 hours.....	51%

The last figures probably represent the results of a late series of operations.

TREATMENT

Medicines or food by mouth should never be given in any suspected case. No fluid, water or anything of any sort should be put into the stomach. The idea of giving methylene blue to aid in finding the perforation is in my judgment not necessary and would appear harmful. Only morphine for pain by hypo is advisable.

Mikulicz is given credit for being first to operate perforating gastric ulcer, in 1880. The first successful operation was reported by Kriege, in 1892.

Deaver (*Annals of Surgery*, March, 1921), advises where possible that gastro-enterostomy be done at time of closing perforating.

Patients should not be transported great dis-

tances after rupture. The surgeon had best go to the patient.

Surgical treatment should be instituted early and as a life-saving measure need only consist in opening the abdomen, closing the perforation and putting a patch of omentum over the area and suturing it to the surrounding area of stomach; closing the abdomen above and putting in a rubber drain supra-pubically.

The question of whether we do a posterior gastro-enterostomy at the same time depends on how early we see the case. It should never be done after a 12 hour perforation. It should only be done at any time in the presence of perforation by the real experienced surgeon. This can always be done later as an operation of election.

Incision. I am just a little partial to a transverse incision, or at least a gridiron through the right rectus muscle as I think we are less liable to have the wound open or hernia develop.

Sutures. Linen or silk for stomach closure and patch. Catgut for the abdominal wall with figure of 8 silk worm stays should always be used.

A good suction apparatus shortens the operation and facilitates closure more than anything I know. The question of simple suture or excision of the ulcer area must be settled by the operator at the time of operation.

Where a short operation is important stop the leak and get out and the mortality will be lower.

To recapitulate. I will only say that a two-stage operation here is as justifiable as in prostate work so far as the average surgeon is concerned.

ILLUSTRATIVE CASE REPORTS

Four Cases of Ruptured Gastric and Duodenal Ulcer With Operation and Recovery

CASE 1.—Mr. G. C., aged 29. Electrician. Seen in consultation with Dr. McCollum, Erlanger, Ky., December 18, 1919.

Patient had been well except for chronic stomach trouble practically all his life; was in an automobile accident about 6 days before.

Onset: Very sudden on December 17, at 9:00 p. m. Severe pain in abdomen, which required 1/2 gr. morphine to even partially relieve the pain. I saw patient the following day in the morning.

Physical Examination: Temperature 100° F. Pulse 108. Abdomen characteristically hard all over. Very rigid and of that type that when once learned always means ruptured viscera, usually stomach or duodenum, may be gall-bladder.

The most usual mistake made is by suspecting ruptured appendix. After careful examination and history analysis, we made a diagnosis of ruptured gastric or duodenal ulcer and the patient was sent at once to St. Elizabeth Hospital, Covington, Kentucky.

Operation same day at St. Elizabeth Hospital, December 18, 1919, Covington, Ky. Median incision revealed general peritoneal irritation due

to stomach contents being free in the cavity, and a round perforation in the duodenum, the size of a 22 bullet, about one inch distal to the pylorus. This hole was sutured with linen and patched over with a piece of omentum and well sewed down all around the perforation.

A lower incision for drainage of pelvic cavity and removal of appendix was made.

Convalescence was smooth and rapid and up to April, 1921, there had not been any serious return of symptoms.

Patient was operated about 18 hours after rupture.

CASE 2. Mrs. J. R., aged 47. Seen in consultation with Dr. George W. Moore, August 14, 1920, at 3:00 p. m.

Dr. Moore called up and said that while in his practice he had not had a case of ruptured gastric ulcer before, he felt sure he had such a case now and for me to come out and see the case in consultation with him.

Mrs. J. R. gave a history of chronic gastric distress after eating. She had had one attack two years before, when the gall-bladder was blamed for her trouble. This attack was accompanied by pain, fever, mild jaundice and some upper abdominal tenderness.

Onset of the present attack was very sudden. Sunday morning 6:30 to 7:00 o'clock violent pain; some nausea; very little vomiting, and very pronounced rigidity. One-half grain of morphine was necessary to relieve pain.

She had three hours of quiet and then the perforation leaked a little more and produced more pain. I saw her at 3:00 p. m., (as I was out of the city in the forenoon) and concurred in the diagnosis. The seriousness of the condition was explained to the patient but she wanted a little time to consider. At 3:30 o'clock there was evidently another contraction or peristaltic wave, causing more stomach fluids to be forced into the peritoneal cavity, and she asked for immediate operation, which was done as soon as she could be moved to the hospital.

Operation. The patient was operated on at St. Mary's Hospital at 8:00 p. m., September 13, 1920. An upper median incision revealed a large amount of fluid and gas in the abdominal cavity, and a round perforating ulcer, the size of a 22 calibre bullet near the pylorus on the gastric side of the stomach.

The perforation was closed by over and over stitch of linen and well patched with a piece of gastro-colic mesenteric fold using linen suture. A puncture wound was made above the bladder for drainage of fluids that had gravitated to the pelvis and the upper incision was closed without drainage.

Recovery was uneventful the patient leaving the hospital on the fourteenth day, and she has been free from any pronounced stomach symptoms since.

CASE 3.—Mr. T. S., aged 63. Carpenter and

still at work at his trade. Seen in consultation with Dr. Trinkle, October 3, 1920, at 8:30 p. m.

History: While at work about 4:00 p. m., October 6, patient was seized with sudden pain in the abdomen that was so intense he could hardly get home. Dr. Trinkle was called and had to give two quarter-grain doses of morphia to give relief from pain. This was at 6:00 p. m. and I saw the patient at 8:30 o'clock.

Physical Examination: Patient was thin and small of stature. Pulse 120; temperature 100°; respiration 20. Some pain. Abdomen very, very rigid all over. In fact the hardest abdomen I most ever examined. I spent 20 or 30 minutes going over the case carefully and then watched for any peristaltic wave and then went over him again and made a diagnosis of ruptured gastric or duodenal ulcer and advised immediate operation. This advice was accepted and the patient was taken at once to the Good Samaritan Hospital, in a sitting position in Dr. Trinkle's car and an immediate operation was done.

Operation at 9:30 p. m., 5½ hours after rupture. An upper median incision was made down to the posterior sheath of the rectus muscle. This sheath was split transversely and parallel to its fibers and gas and stomach contents were found in the cavity. Through this incision we were able to suture with linen a round perforation in the stomach, 1/4 inch in size and put a patch of omentum over the hole. No effort was made to do any sort of drainage operation in any of the cases.

A small punctured wound above the bladder carried a drainage tube into the pelvis.

Subsequent History: Good for 4 days; then some fever for 3 days when the upper incision was opened and drained and a lot of foul pus was evacuated from the incision which only opened down to the posterior sheath of rectus. A normal convalescence followed and there was no hernia. The patient went back to work at his trade.

CASE 4.—Mr. P. F., aged 20, mechanic. Seen in consultation with Dr. Wintermeyer of Covington, Ky., at Booth Hospital, November 12, 1920, at 7:00 p. m.

Onset very sudden at 5:00 p. m. while at work. Pain so great that patient could hardly be handled and just howled and howled even after 1/2 grain of morphia had been given. He was sent at once to the hospital and prepared for operation. A diagnosis of gastric or duodenal ulcer rupture was made with a possible appendix rupture in mind.

Physical Examination. Pulse 130; temperature 100°. Respiration labored but not fast and rather jerky due to intense pain. Some shock. Abdomen typically rigid all over and very, very hard. This type of rigidity I have found in all acute rupture cases in which some stomach juices or contents have insulted the peritoneum.

Previous History: Had not seen a doctor for anything for years.

Diagnosis: Ruptured gastric ulcer.

Operation: An upper abdominal incision was made and perforating gastric ulcer found and closed with linen and patched with omentum.

Subsequent History: Patient did very well for 4 days and then developed diaphragmatic pleurisy and typical supra-clavicular pain; this was followed by dullness in the right lung area, which increased in amount and degree. The temperature, pulse and respiration were those of ordinary septic infection. Diagnostic needle puncture at the end of 10 days did not get fluid or pus. Condition continued the same. About the 14th day we made another puncture and found pus low down near the diaphragm. Under ether a rib was resected and a large quantity of thin pus was evacuated. This pus had an odor similar to acid putrid stomach contents. Tube drainage for 4 weeks did not clear up the sepsis. We then diagnosed the case as lung infarct at the base, diaphragmatic pleurisy, empyema and gangrene of the lung as result of the infarct. The patient's stay in the hospital was of about 10 weeks duration.

Subsequent history: There was gradual improvement. Drainage wound closed up and the patient was gradually getting stronger March 1, 1921.

A very troublesome cough persisted all through the case for 3 months.

No hernia has developed.

THE GROTON.

NEW BOOKS

Operative Surgery, by J. Shelton Horsley, M.D., F. A. C. S., Attending Surgeon, St. Elizabeth's Hospital, Richmond, Va. With 613 original illustrations, illustrated by Miss Helen Lorraine. The C. V. Mosby Company, Metropolitan Bldg., St. Louis, Publishers. Price \$10.00.

General Pathology—An Introduction to the Study of Medicine. Being a Discussion of the Development and Nature of Processes of Diseases. By Horst Certel, Stratheona Professor of Pathology and Director of the Pathological Museum and Laboratories of McGill University and of the Royal Victoria Hospital, Montreal, Canada. Cloth, pp. 357, with Illustrations. Price \$5.00 net. New York. Paul B. Hoeber.

The Assessment of Physical Fitness, by Correlation of Vital Capacity and Certain Measurements of the Body. By George Dreyer, C. B. E., M.A., M.D., Fellow of Lincoln College, Professor of Pathology in the University of Oxford. In collaboration with George Fulford Hanson. With a Foreword by Charles H. Mayo, M.D., Rochester, Minn. Cloth, pp. 128, with xxiv Tables, price \$3.50 net. New York. Paul B. Hoeber.

Slow Perforations of Abdominal Viscera*

S. D. FOSTER, M.D., F. A. C. S., Toledo
Surgeon to Flower Hospital

Editor's Note.—Unlike acute perforations of gastric or duodenal ulcer with their dramatic suddenness of onset and violence of symptomatology, slow perforations of abdominal viscera are insidious in their occurrence and advance. They do, however, go on to prolonged illness, a complicated recovery or death from asthenia. Slow perforations can only be detected by the keen eye or tactile finger, which finds a muscle rigidity or tumor. Blood pressure may show a sudden drop from the shock and then a gradual rise. Occasionally the pulse rate may increase abruptly enough to attract attention and indicate trouble. Dr. Foster further suggests that slow perforations are associated with typhoid fever, ulceration or malignancy or tuberculosis of the gastro-intestinal tract, diverticula, cholecystitis, appendicitis and extensive burns of the skin. Fortunately the great omentum acts as a protective covering and saves the patient long enough for remedial surgery.

THE late P. S. Conner was many times almost uncanny in his knowledge of anatomy, diagnosis and surgery. He was always well fortified with aphorisms of surgery, which were gems in the professional language of his day. None could be more truthful and helpful, than when he so often repeated the following: "*Whenever you get a case, that is just like the one in the book, you may be sure that you are wrong in your diagnosis.*" The verity of this remark has been often proved and especially in abdominal work. I repeated the remark to J. C. Munroe at Carney Hospital in Boston one day just before he was to operate upon a so-called typical intestinal ulceration. When after a long search, he found no ulceration, he looked up at me and said, "Check one more for Conner."

Abdominal work would be shorn of much of its troubles and perplexities, if the beautiful story, as outlined by Fair, (*Annals of Surgery*, November 20, 1920, p. 59); was that which we most frequently see. He says: "Of the acute abdominal cases, perforation of a gastric or duodenal ulcer ranks easily first in its dramatic suddenness of onset, its violence of symptomatology, and its gravity."

Those acute cases are dramatic enough from the beginning to the end, no matter what that end may be.

In those acute cases, Fair's mortality of 12½ per cent. is something of which we might well be proud. However, it is this condition of high drama, that commands immediately, for each and every such person, the very best there is to be had in the way of good surgical care and treatment.

SIGNS AND SYMPTOMS OF SLOW PERFORATION

Now there is a class of cases, which do not come with ringing of bells and tooting of horns. They advance, like the stillness of the dark. They do advance, however, toward a prolonged illness, a complicated recovery or death from asthenia, general peritonitis or obstruction of the bowel—*ileus*. Such an advance is only recognized by the keen eye or tactile finger, which finds a muscle rigidity or

tumor. It is not much, to be sure, but it is enough to show that there has been a change in the local pathology, or it may be an increase in the condition already present.

Often the blood pressure, if it has been followed closely, will first show a sudden drop from the shock and then a gradual rise. It may be the pulse, which will show the first indication of trouble. It would probably show a sudden increase in rate, but the increase will not be so much as to attract attention, unless it is looked after.

Such cases comprise the class of *slow perforation*, or they might properly be called the *chronic abdomen*.

It would help to recognize them, if we had foremost in our minds, the knowledge that such conditions are most frequently found co-existing with or following typhoid fever, ulceration of the gastro-intestinal canal, malignancy of the stomach or bowel, tuberculosis of the same tract, diverticula, whether congenital or acquired, cholecystitis, appendicitis and after extensive burns of the skin. Of course, if the patient with one of the above conditions, begins to pass fecal matter and air with the urine, it needs no special amount of gray matter, to recognize the fact, that there has been a fistulous opening established between the diseased organ and the bladder. This would naturally call for surgical intervention as soon as the patient's condition will permit.

A study of such a case and its records should be thoroughly made to cover a period of days, and see, if we then can find any evidence of impending perforation.

VALUE OF ROENTGENOLOGY IN DIVERTICULA

With the high standard of work of our Roentgenologists, now being done on the gastro-intestinal tract, we have a great help in the preliminary work in these cases. Their work, when accompanied by a scientific and careful interpretation of the plates, has been a revelation. Formerly, a diverticulum of the intestine was only discovered by the surgeon at the time of operation, or it was found upon the postmortem table. Now, it is nothing unusual for the X-ray plate to show one or many diverticula, even

*Read before the Surgical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

when that patient has only been complaining of some general abdominal distress. Each diverticulum, whether congenital or acquired has walls, the tissue of which, are always of lowered vitality. These are the contributing factors towards ulceration and a slow perforation, and the individual cases should be studied as such.

PERFORATING GALL-STONE AND DISSECTING ABSCESS OF CECUM

The gallbladder is a great source of trouble also. The presence of a stone or stones is always an aid to the perforation. Often the only evidence we have that such a perforation has occurred, is the passage per rectum, of a stone so large, that we know it could not get through the common duct. At other times, in the presence of only an infecting organism within the cavity of the gallbladder, there is a destruction of the wall, so slowly, that Nature has time to keep it walled off by the adhesions formed. This abscess may become so large that it will simulate a tumor of anything in that side, even down to the appendix.

In an article entitled "Dissecting Abscess of the Cecum," Hagler described a condition, which to me appeared to be a *slow perforation*. In a personal letter, however, he says "I feel quite sure that chronic perforation was ruled out at the time of the operation. There was an absence of adhesions or any attempt to wall off." He also enclosed a letter from Leonard, of Portland, Oregon, describing a similar case, in which, however, there were adhesions and also a second abscess.

Personally, I can see no way to rule out a slow perforation. It is within the cavity of the bowel that we find so great an abundance of these infecting organisms. It would be very difficult to think of these infections coming from without, and entering the cecal coat from the peritoneal layer. The only other source would be the hematogenous route. However, there is no scientific interest in prolonging such a discussion, and we only report them to show what may happen. It so often happens, as it did here, that conditions are found, for which the surgeon is not looking.

PROTECTIVE ACTION OF THE GREAT OMENTUM

One thing that is a great life saver in these cases is that in the great omentum, we have a long movable organ within the abdomen that is guided by a greater *Mind* than ours. It is not only as an apron that it acts; but it is also the great policeman of this cavity. It is quickly at the site of trouble, when perforation is threatening. To help this omentum in its work, we have the natural adhesive property of the peritoneal surface covering these abdominal viscera. Together with this is the exudation of much lymph. This lymph, in turn, either acts as a plaster to

cover the opening, or it becomes the protecting wall of an abscess. This abscess, once formed, may travel so that it will find many strange exits from the body.

ILLUSTRATIVE CASE REPORT

Any number of cases might be reported covering pathologies of various and numerous kinds. I am going to report one case, somewhat in detail, that you may draw some conclusions from the facts submitted.

Following a milk infection, there was in one community a very large number of cases of typhoid fever, mostly of the severe type. Many of them had complications, which showed the prevalent organism to be a virulent one.

Case History.—Mr. X— was a young man 18 years old. He had never been sick but had a right inguinal hernia. Last July he attended a festival and he with others contracted typhoid fever. The physician was called August 18, 1920, and his first note says that the boy had been sick about one week. At that time the temperature was 103.6° and pulse 65; the relative height of the two speaking well for typhoid. Three days later there was cough and nosebleed. The next day the nosebleed continued, cough was troublesome but lungs were clear. Two days later abdominal tenderness became more pronounced on the left side. (Here, to the author, seems to be the place where real trouble is beginning.) The next day nose-bleed occurred again, the cough was still annoying; there was also moderate distention and some tenderness. Up to this date the patient slept fairly well and had had no headache. The last four days of August he improved in every way and the tenderness was gone. Improvement seemingly continued, but on September 5, there was abdominal tenderness, very marked on the left side of the umbilicus, with much distention. Hematuria and bloody stools now presented. On September 10 abdominal tenderness on the left side increased. Two days later the tender area was dull. This section of dullness was getting larger. The general condition grew worse and the patient was delirious at times. On September 25 the area of dullness extended to the right of the umbilicus and was six inches in diameter. Patient could only lie on his back with any comfort. At this time a diagnosis of *slow perforation* was made and operation advised.

Operation.—Under ether an incision was made two inches to the left of the umbilicus and three inches long. About four quarts of thin white fluid were evacuated, and two rubber tubes inserted. No intestines were observed. The posterior wall of the cavity was above the intestines. The abdomen was very flat after operation. Much vomiting and distress followed at once, but the next day the patient was better. One week later he felt more fullness, but the cavity was dry. Two days later, through the old incision, an

emergency exploration was made by another surgeon. This was followed by escape of large amounts of intestinal contents. The opening in the bowel was closed by suture and the patient died the same evening.

The report of this case in detail is not given with the idea of crowning anyone with glory, nor with the idea of pointing the finger of shame at anyone. There was among those who attended that boy, one united mind toward getting him well.

We are all practitioners together, and we would not be at this meeting, if we were not trying to make our weaknesses fewer in number. We, each of us, desire to go away from here thinking, that during the next year, we will unite and give our patients better medical attention than they have ever had before. A medical man, who thoroughly prepares himself, and then does the best that his judgment tells him, is doing all that any human being is called upon to do.

201 THE COLTON.

Ulcer and Cancer of Stomach and Ulcer of the Duodenum*

GEORGE W. CRILE, M.D., F. A. C. S., Cleveland

Editor's Note.—Dr. Crile is convinced that no absolute differential diagnosis between cancer and ulcer is possible before operation: nor at the operation excepting by the pathologist; nor by the pathologist in certain borderline cases. Irrespective of operative treatment, the dietetic management of all ulcer cases is an essential before and after surgical intervention. It has been found that the fainting point can be used clinically to arrest hemorrhage from gastric or duodenal ulcer. In patients, exhausted by long standing ulcer or cancer, conservation and restoration of bodily economy must be secured by restoration and preservation of the acid-alkali balance of the cells, particularly of the brain and liver; maintenance of an adequate circulation; as well as a minimizing and, where indicated, a dividing of the trauma of operation. Dr. Crile summarizes his views in a series of surgical suggestions, the following of which have enabled him to reduce the mortality rate in stomach operations, gastro-enterostomies and resections, to 1.5 per cent.

THE problems relating to the treatment of ulcer or cancer of the stomach or duodenum may be summed up in the following queries:

(A). Can cancer and ulcer be differentiated with certainty?

(B). What is the method of choice in the treatment of gastric or duodenal ulcers,—surgical measures alone, medical measures alone, or both combined?

(C). How shall hemorrhage from gastric or duodenal ulcer be controlled?

(D). How shall the patient exhausted by long standing ulcer or cancer be conserved and restored?

(A). DIFFERENTIAL DIAGNOSIS

No absolute differential diagnosis between cancer and ulcer is possible before operation; nor at the operation excepting by the pathologist; nor by the pathologist in certain borderline cases.

(B). TREATMENT

In early ulcers, or unless there is strong probability of cancer, a fair trial of non-surgical treatment,—controlled feeding at frequent intervals with an alkalizing diet (Sippy diet)—should be tried faithfully, provided the patient's thorough cooperation is assured. The surgical results themselves are undoubtedly due largely to the enforced physiologic rest and the alkalization of the stomach contents. If non-surgical

measures fail, then in face of the possibility of later cancer development, of perforation, of hemorrhage, gastro-enterostomy is required. If there is an ulcer mass resection is indicated. Even after operation, however, it is essential that the diet be strictly controlled by the attending physician for a prolonged period—a year at least.

(C). CONTROL OF HEMORRHAGE

In hemorrhage from gastric or duodenal ulcer, its immediate arrest may be accomplished by utilizing the following principle in biologic adaptation:—

As a defense against death from hemorrhage a mechanism has been evolved for increasing the coagulation of the blood as the death point approaches. It is logical, therefore, to utilize the fainting point clinically as an indication that the blood-pressure is sufficiently low for the hemorrhage to be arrested by coagulation. The patient being kept under continuous observation and control, an attempt is made to bring him to the fainting point by having him sit upright in bed. If the upright position does not produce blanching, a steady pulse and a moist forehead, then the blood may be sequestered in the extremities by adjusting a tourniquet around the thigh just tightly enough to block the venous but not the arterial flow. In this way enough blood may be tentatively removed from the general circulation to reduce the blood pressure until the fainting point is reached. The length of time this point should be maintained is empiric, but a brief period is sufficient to assure the formation

*Read before the Surgical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

of a secure clot at the bleeding point. Not only are the open vessels plugged but the patient has left in his body plenty of blood to flood the blanched brain when the bandages are released and the posture altered.

(D). CONSERVATION AND RESTORATION

The cardinal ends to be secured are:

1. Restoration and preservation of the acid-alkali balance of the cells—of the brain and the liver in particular.
2. Maintenance of an adequate circulation.
3. Minimizing and, where indicated, dividing the trauma of operation.

The acid-alkali balance already threatened by the starved condition of the patient is restored in part by administering large quantities of water by rectum and subcutaneously; and by operating under analgesia with nitrous oxid-oxygen. Anesthesia if required at certain stages of the operation is but momentary, the patient being brought back to analgesia as soon as the point of need is passed.

An adequate circulation is assured by the direct transfusion of blood in anaemic cases, and by the administration of digitalis, if the myocardium is failing.

The trauma of operation is minimized by an ample incision, by local anesthesia, by sharp knife dissection, by tying sutures lightly.

If there is a cancer-like mass and the hazard is great, the operation is performed in two stages; a gastro-enterostomy first, the resection being deferred until the nutritional balance is established on a safe margin. The two-stage operation serves another purpose also. In cases in which it is impossible to differentiate cancer from ulcer by any of the diagnostic means at our command, the interval of rest makes it possible for the organ to tell its own story. If ulcer, the mass may disappear so that the resection will not be required; if cancer, the rest provided by the preliminary gastro-enterostomy may reduce the size of the growth by diminishing the inflammatory tissue.

After the resection special precautions are necessary to assure complete rest of mind and body; adequate amounts of water should be urged; and the diet guided strictly until a good nutritional and water balance is assured.

SURGICAL SUGGESTIONS

The operative procedures, based on the preceding considerations, may be briefly summarized as follows:

1. The general condition of the patient is improved prior to operation by the administration of large quantities of sodium bicarbonate and glucose (five per cent. solutions of each) by rectum; and if pyloric obstruction is marked, by the subcutaneous injection of much water.
2. If there is marked anaemia, an adequate transfusion of blood is given.
3. If the risk is extremely grave, nitrous

oxid-oxygen is used only to the extent of analgesia, and dependence is placed mainly on local anesthesia. If the risk is fair, proceed as usual for abdominal operations.

4. An ample incision is made so that the operation may be taken to the stomach, and the stomach not pulled out, unless it will come out easily without being pulled.

5. If there is a cancer-like mass, and the hazard is great, then a gastro-enterostomy is done at the first operation, the operation being completed in one seance.

6. In case of a two-stage operation, the resection may be made after the nutritional balance is well established, usually in about a week.

7. In the second operation not only will the resection be made with little disturbance, but as a result of the preliminary gastro-enterostomy there will be a strong mobilization of the elements that make up local immunity against infection in the operative field.

8. In the resection, if adhesions are found, they are divided with a sharp knife. All dissections are made with a sharp knife.

9. A wide excision of the tumor is made.

10. Round needles are used for suturing the stomach.

11. Post-operative hemorrhage is avoided by using the cobbler stitch.

12. The interrupted sutures are tied lightly.

13. Should there be post-operative vomiting, the stomach tube is used promptly.

14. Usually less post-operative disturbance is caused by the second and larger operation than by the first.

15. After the resection, special precautions are taken to keep the patient warm, and to keep up a good nutritional and water balance. The two-stage operation gives splendid opportunity for this because the physiologic adjustment resulting from the gastro-enterostomy occurs before the resection is made.

16. Convalescence is usually secure.

17. The post-operative care of ulcer cases should be controlled for many months.

By following this general plan of treatment as adapted to the needs of the individual patient the mortality rate in stomach operations—gastro-enterostomies and resections—has been reduced to 1.5 per cent.

THE CLEVELAND CLINIC.

NEW BOOKS

General Medicine, Volume 1 of the Practical Series, 1921. Edited by Frank Billings, M.S., M.D., head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and Burrell O. Raulston, A.B., M.D., Assistant Attending Physician and Resident Pathologist, Presbyterian Hospital, Chicago. Price \$2.50. Price of the series of eight volumes, \$12.00. The Year Book Publishers, 304 South Dearborn St., Chicago, Ill.

Obstetrical Obligations*

MAGNUS A. TATE, M. D., F. A. C. S., Cincinnati

Editor's Note.—In view of the deplorable morbidity and mortality among child-bearing women it is not surprising to have Dr. Tate emphasize the obstetrical obligations of the profession and to appeal for a betterment of teaching and training on the part of medical schools in the department of obstetrics. It is almost trite to again stress the need for specialists in obstetrics. Also sterile mothers are entitled to more consideration than they have been receiving and remedial measures should be advocated and tried out whenever they offer some prospects of success. The developments in the field of endocrinology have materially broadened therapeutics in obstetrics and the use of radium is writing a new chapter in the specialty. If a great deal is to be accomplished in the near future the practice of obstetrics must be improved not only in general practice but it must be standardized in the hospitals as well; pre-natal care must be greatly extended in its scope and a follow-up system must be utilized to keep track of results.

THE Practice of Obstetrics is slowly gaining ground, both from the practical as well as the scientific standpoint. Our women are demanding better obstetrics, and most of the profession are working towards that goal.

It is becoming more evident, that the well informed and enlightened, are seeking ways and means to better existing conditions. If the observations of Williams as given some years ago on the lack of proper obstetrical teaching to medical students still holds good, and if the needless loss of women be true, then it is high time that the profession as a whole, consider the practice of obstetrics from a different viewpoint, and gracefully accept the teachings and dictums of those who are acknowledged authorities.

At the meeting in March, 1920, of the Association of American Medical Colleges, I note the following in a paper by Williams on the "Teaching of Obstetrics and Gynecology":—

First, That Obstetrics and Gynecology should be merged into a single department, and under the headship of one professor, a full time man, (De Lee).

Second, In America, that most of our Gynecologists have no Obstetrical training.

Third, The chief cause for the prevalence of poor Obstetrics in this country, lies in the tardy appreciation by authorities of medical schools, of the physical needs of the Department of Obstetrics.

THE DEPLORABLE MORBIDITY AND MORTALITY OF CHILDBEARING

Reports from the United States Government, Department of Labor, state that 20,000 women die annually from conditions caused by childbirth, and of this number 9,000 of sepsis, and the balance 11,000 from diseases and conditions, which are now known to a great extent to be preventable or curable.

Every year in these United States more than two million women submit themselves to the contest with death in the bringing of children into the world. For the casualties of war our coun-

try is trying to provide free medical and surgical care by those having experience along scientific and advanced lines, but for the casualties of motherhood our government assumes no interest or responsibility, yet under the Smith-Lever law we spend annually \$47,000,000 on the care of hogs. If the so-called Shepard-Towner bill now before Congress ever becomes a law, its effectiveness will be watched not only by the profession but by the entire women of our land.

In the year 1913 childbirth caused more deaths among our American women from the ages of 15 to 45, than any of our prevalent diseases, with the exception of tuberculosis. A comparison of mortality rates among a group of 15 of the important countries of the old world, is not creditable to the United States, for only two of them show a higher death rate. In a period of 13 years—from 1900 to 1913, we find no decrease in our death rate, and surely this demonstrates, that if we are to improve existing conditions, there must be an acceptance of advanced maternal care, of bettering present conditions, and assigning of this branch of medicine to those who are qualified to accept this trust.

If education of the standards of right marital relationship continue to be neglected, and if the value of motherhood in civilized countries be glided over with only a Fourth of July speech, then the reduction in birth rate as now exists will continue, and a great menace to the heart of the world will soon become pronounced and be a problem of difficult equable solution.

One boon to obstetrics is the gradual disappearance of those women who styled themselves *Midwives*. As a class they were carriers of infection and breeders of trouble. If education of our womanhood can almost do away with midwives, then more and better education of women in general can surely alter such death rates maternal and infantile, as given us by our own government.

NEED FOR SPECIALISTS IN OBSTETRICS

Most of our general practitioners do obstetrics, and whether they, as a class, are efficient or not, depends upon many factors, two standing out pre-eminently, *namely*, diagnosis and cleanliness.

*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4-6, 1921.

In our larger cities there is a tendency on the part of some physicians to specialize and results are manifest, and no one in this country should be allowed to hold a responsible position in any hospital unless they do specialize, for such men and women have passed through the embryonic stage, have received thorough training, and are able not only to manage cases properly, but to do all of the surgery pertaining to this important branch of medicine.

It is now a self-evident fact that we cannot be masters in all branches of the healing art, that our minds and bodies can only respond up to a certain mark, that assimilation of the fundamentals of medicine is worthy of our earnest endeavors, but human intelligence cannot grasp or retain all the advances in medicine and surgery. So specialism is naturally a self-solved problem, some taking this, others that branch, whereby we can be of mutual help to one another, with resulting progress for all.

It is particularly pleasing to note, that in our medical colleges when full time professorships are to be appointed, that it is not friendship and pull, but ability that is the essential factor in their selection. For any department in a hospital or college to be a success it must demonstrate first, that it is entitled to respect, and second, the head of department must be well educated, capable and a thoroughly trained specialist, otherwise a high standard of efficiency is lacking.

We have a very fertile field for study in that large class of women who are desirous of children, but from one or more causes are denied the fulfilling of their maternal instincts. Unfortunately the causes of sterility are multiple, and at present reliable data of successful treatments are slow in being presented, but investigation and thorough examination of pelvic conditions, often reveal a mandatory field for proper surgery.

The usual method of curettage with the oft repeated dilatation, has here and there produced desired results in some of those cases of small uteri approaching the semi-infantile type. Naturally the fertility of the male must be proved before any radical procedure is undertaken, otherwise the adoption of surgery cannot be too strongly condemned, and we know only too well that women who are sterile with first may become pregnant with second husband. There are now very many cases reported where absolute sterility of years standing has been overcome, which adds a standardized field for progressive surgery.

Examples might be mentioned in those cases where there has existed a gonorrhoeal infection an imbedding of ovaries and a closing of tubes, where liberating ovaries, probing of tubes sometimes opening them, and a pregnancy has followed. Likewise it is reported that in those cases with a thickened cortex, that if we strip or cut off a portion of cortex, that we allow a space for rupture of graafian follicles and desired results

are obtained. On old cases of peritonitis (not gonorrhoeal) with adherent and prolapsed adnexa and tubes closed, proper surgery has been followed in some months by pregnancy.

Post-operative abortion cases, the uterus having little or no mobility, tubes closed with numerous adhesions binding down the pelvic viscera, surgery has given patient a chance for pregnancy and cases of success have been reported. At present we are more familiar with the results following curettage, with correction of displaced uteri, resection of enlarged cystic ovaries and removal of subperitoneal fibroids. In the past, a section for any of the above mentioned conditions did not meet with the approval of the profession, but with reports of repeated successful cases, there is now a tendency to advocate surgical measures in selected instances. However the correcting of a marked acid vaginal secretion, an excessive leucorrhoeal discharge and the reduction of obesity, are familiar to the profession, but unfortunately are not receiving at present due consideration.

Artificial impregnation has caused much discussion, is repeatedly successful in the hands of the skilled veterinary, but when it comes to dealing with the average American woman the idea is revolting, yet only within the past year Dickenson reports five successful cases. The advocacy of such an extreme measure rests entirely with the parties concerned, yet there must be a realization that it is by no means free from danger.

Another important phase for study by obstetricians are the endocrines. What of their influence mental and physical in women and especially pregnant women? King's excellent paper published in "Obstetrics and Gynecology" draws our attention to many important facts well worth our consideration. Everything we know pertaining to the science of medicine was first a theory, then by observation and experimentation it became knowledge. The ductless glands at present are to an extent an unknown problem, and a great field is open to us for investigation. We are now describing many of the mental, emotional and physiological processes to the activity of the ductless glands, and whether we are right or wrong in our deductions, only by experimentation, observation and the gathering of reliable statistics, can we hope to derive definite knowledge and truth. Probably the best example of which we have any reliable data on the disturbance of the internal secretions, is in that disease classified as acromegala, with its hyper—followed by hypo-secretion, and the mental and physical improvement with the administration of the thyroids.

What do we know positively of the power of attraction, of love, hatred, fear, fright, puberty, onset of menstruation? Why its definite period, its subsidence, the onset and power of reproduction and of the waning properties?

What accurate explanation have we to offer of

precocious sexual development in animals after removal of thymus, and of the failure of sex characteristics, and revision to infantile type after removal of posterior lobe of pituitary gland? Does the natural atrophy of the thymus gland in the human female, allow the pituitary gland to hypersecrete, and this added functional secretion later stimulate the ovaries to go through its ovular cycle? Why the psychic hysteria so often found at the menstrual period, with the many tears, sometimes great anger, an entire change in disposition, with here and there that added tendency to manual labor, and any friendly remonstrance bringing forth a flood of tears, and rest of body coming only with physical exhaustion? Why that intense headache, backache and vomiting so often seen during the menstrual cycle? What of the suicidal tendency during this period, is it an adding or withdrawal of some internal secretion, or what is this inherent functional disturbance which so unbalances the general bodily mechanism?

Demonstrations of increased glandular activity are noted with every pregnancy. Is it true that with this functional glandular disturbance, there is a lowered bodily resistance, if so, will this explain the high death rate so often noted in pregnant women in the midst of some epidemic, such as our late scourge—*influenza*?

Why do some women suffer from the pernicious vomiting of pregnancy, is it some faulty ovarian or corpus luteum secretion, and are we justified in accepting the treatment of Hirst—the administration of corpus luteum?

Is that theoretical disease eclampsia in any way associated with profound glandular disturbance?

What do we actually know of the breast changes of pregnancy, of thyroid enlargement, bodily pigmentation, rapid increase in weight and even the onset of labor?

Why do we so often hear the story of some women, who in the early months of pregnancy are desirous of being rid of their offspring, willing to accept any risk to gain their end, yet as term approaches becoming reconciled, then happy, and later developing that great mother love? Financial distress or resignation offers no explanation to the intelligent.

What of the timid human or animal mother, becoming courageous following a pregnancy, who when danger threatens her offspring, is willing to and frequently does sacrifice her own life for the preservation of her young? Is this an added glandular secretion that gives her the power to overcome fear?

Is the artificial menopause with its complex syndrome purely a withdrawal of the ovarian secretion? Are the adrenals at fault in those cases of pronounced vasomotor disturbance?

Is that unfortunate class, in whom melancholia and insanity supervene, the victim of some metabolic change in the entire nervous system associated with an endocrine disturbance? If by ex-

perimental research, (biochemically and physiologically), light is thrown upon these enigmas, then many chapters of our present literature will be revised, and especially will this be pronounced in obstetrical reasoning of many of our perplexing problems.

I have often thought that some of the profession have been unduly enthusiastic over the endocrines, and have fed many a sterile woman with numerous glandular mixtures, without having statistical or reasoning grounds on which to base their treatment.

RADIUM AND OBSTETRICS

Radium inhibits the menstrual flow and is known to interfere with the production of ova. This is very important and well worth earnest consideration. Care should be exercised in advising radium treatment in all pelvic conditions other than that of cancer, if there be a likelihood of even a pregnancy supervening. An unsettled query, does the action of radium ever extend so far in those cases who do become pregnant as to cause a maldevelopment of fetus?

If a physician feels that he is capable of handling this or that case of obstetrics, his duty is clear; but if confronted with technical or manual difficulties, in which there is a doubt as to a favorable outcome, assistance is imperative, and no one today should take the hit or miss chance, or let an exhausted nature try to overcome and repair negligence and want of foresight. Williams has repeatedly stated, without contradiction, that half of the uterine operations are due directly to childbirth.

Standardization of our hospitals is helping obstetrics and bringing it to a higher plane, by the adoption of a schedule of history taking. Questions propounded must be satisfactorily answered or the hospital cannot receive and hold an A grading, hence it is to the interest of all concerned to see that this proper rank is attained.

The knowing in advance by the physician of the past, present, and family history is of inestimable value, this coupled with a general body, abdominal pelvic examination and mensuration, along with blood pressure readings and urinalysis, give the patient a chance under competent care, to have what is sometimes spoken of as a *physiological parturition*, and thus the physician is meeting his obstetrical obligations in a scientific manner. A good history is a concise one, embracing the essentials, so when vague symptoms or obstacles are encountered, the time to meet them or lay out the future of case, is when the patient is first examined while in the pregnant state.

It is very difficult at times (without ocular manifestations) to obtain a specific history, so we should never neglect the laboratory means at hand, but when the diagnosis is cleared, it is remarkable what improvement will often follow

upon the administration of antisyphilitic remedies. This brings up a pertinent question, is a routine Wassermann, a prophylactic necessity with every case of pregnancy? Is syphilis so insidious in its undermining of system that 47% of those infected present no objective symptoms?

That the toxemias of pregnancy when encountered may be handled with good results, is proved by the relative decrease in maternal and fetal mortality. The discovery of eye, throat, heart, lungs, abdominal or other bodily ailment, while patient be in the pregnant state, gives the attending physician the factor of time to analyze and prepare to do what is necessary to meet the needs of individual case. In other words the physician is meeting his obligations, as a well qualified member of the profession.

The allowing of thousands of women to go into labor without ever having had a history taken, an examination or even an urinalysis made, is mainly due to prejudices on the part of patients who are unwilling to submit to examination, or who are ignorant of the value of pre-natal care, with the result that these women are not meeting their obligations to themselves or their unborn children. It is stated, backed by the statistics of six states (Bigler), that 80 per cent. of women receive no advice or instruction during pregnancy. That at least half of our child-bearing women do not engage a physician before their last month of pregnancy, and especially is such practice prevalent among our foreign born population, who are known to be very suspicious of any innovation.

I have given much thought to what patients have said on numerous occasions, of their physicians who never made an examination of them or asked for a specimen for urinalysis, and have come to this conclusion; *that there are very few physicians of today who neglect all of these precautions, that the fault is generally with the patients themselves, for as already stated they hold firmly to that pre-historic method of not consulting their physician until near the time of delivery.* Naturally it is only by educational means that these women will see the necessity of changing their viewpoint of on-coming motherhood.

THE PHYSICIAN'S OBLIGATIONS

Those physicians, who do fail to meet their obstetrical obligations, I believe, do so for the following inexcusable reasons; careless indifference coupled with a lack of proper compensation for the work entailed. An analysis of this situation brings forth the following; that it is not fair or square, and it certainly is not humane, for any patient to receive such indifference or inattention from any physician, who has the sacredness of his calling at heart, nor has it ever seemed right to me for a physician to accept obstetrical cases (loathing such work) as a means to build up a future practice, unless there was no other to take his place. I also do not believe it is right for

any physician to call some friend in consultation who is not familiar with the obstetrical art, unless it be a case of great emergency where immediate help is necessary. A good motto is—The patient's welfare first and special friendship a poor second.

There is this proposition however which stares us straight in the face, that there are physicians who constantly demean their professional work by accepting insignificant fees from patients, who are well able to pay a reasonable compensation. It is related that the veterinary often receives a fee for attending the cow of the farmer, far in excess of that obtained by the physician for attending the wife through her perilous time. Here comparison is odious, and truly demonstrates a woeful misunderstanding of the value of life, and service, on the part of all concerned. If examinations are to be carefully made, accurate histories taken, attention before, during, and after parturition, surely one who meets these obstetrical obligations is worthy of a competent fee, yet why this undercutting, working for a mere pittance, resulting in uncalled for hardship on themselves and their fellow practitioners is beyond my comprehension.

THE FOLLOW-UP SYSTEM IN OBSTETRICS

The follow-up system in obstetrics is at present not practiced extensively, yet such attention is common in our surgical work. Is it not worth while to know whether the uterus has involuted properly, if it is a movable organ or fixed, if the adnexa are normal, how much of a laceration if any exists in cervix or perineum, whether your repair was successful or not, and if a cystocele or rectocele complicate? Is it not of interest to know whether the patient is in good physical condition, or if she has any of the above mentioned after-effects of labor? Is it not worth while for you to find out this condition and remedy it, than for some other physician to diagnose the existing condition, or to have patient say, "I have never been well since Dr. — attended me at the birth of my baby?" This follow-up system should be an important, not a neglected feature in our routine work, and adds to a completion of our obstetrical obligations.

19 W. SEVENTH ST.

Egg infusion broth has been found by T. M. Rivers, Baltimore (*Journal A. M. A.*, June 18, 1921), to support the growth of influenza bacilli for many generations. Into 250 cc. of 2 per cent. peptone (Fairchild's water, ph 7.6, three eggs were stirred, boiled one minute, filtered through cotton, and autoclaved in 100 cc. quantities for fifteen minutes under 15 pounds of pressure. To each hundred cubic centimeters of the autoclaved egg infusion broth were added from 10 to 20 cc. of a filter-sterilized yeast extract, and this mixture was tubed in 10 cc. quantities under sterile conditions. The medium was incubated forty-eight hours before it was used to be sure of its sterility.

Vaginal Caesarean Section: Its Field of Usefulness with Case Report*

L. E. LEAVENWORTH, M. D., Canton

Editor's Note.—While abdominal hysterotomy is preferable for many of the indications for which vaginal section has been used in the past, the latter procedure is still of value to rapidly empty the uterus in a case in which there is reason to suspect contamination by vaginal manipulation or by unsuccessful attempts to dilate the cervix. Dr. Leavenworth, in supporting this viewpoint, details an illustrative case with perfect recovery and he notes in conclusion that in every case conditions must be favorable for vaginal operation before it can be considered.

VAGINAL Caesarean Section, or vaginal hysterotomy, as it is sometimes called, was introduced by A. Duhrssen, of Berlin, in April, 1895. It was devised as an emergency operation to empty the uterus when the condition of mother or child demanded extreme haste. The operation is not very common, but has been performed for various indications. Among the causes for which the operation has been used, may be mentioned the following complications of pregnancy: eclampsia, placenta praevia, premature separation of the placenta, asphyxia of the child early in labor and internal diseases of the mother. Different authorities give somewhat conflicting opinions as to the indications and conditions for the use of vaginal hysterotomy.

The purpose of this paper is,

1. To consider the more important of these indications.
2. To discuss whether or not there is now any place for the vaginal operation with our present day perfection of technique in abdominal Caesarean Section.
3. To report a case of vaginal Caesarean Section.

INDICATIONS FOR VAGINAL CAESAREAN SECTION

Placenta praevia is one of the most common complications for which the vaginal operation has been recommended. There are several reasons why the operation would be contraindicated in this condition: *First*, the hemorrhage from the placenta praevia would so obscure the field as to make the operation very difficult. *Second*, the considerable bleeding, which may occur following vaginal hysterotomy, when added to the hemorrhage of the placenta praevia, might be sufficient to be fatal. *Third*, the operation is not as rapid as abdominal section and is somewhat more difficult. Therefore, in central and in some cases of partial placenta praevia abdominal Caesarean Section would be the operation of choice. In the marginal variety, we would advise more conservative procedure: *i. e.* the insertion of a Voorhees bag or Braxton Hicks Version.

In *premature separation of the placenta*, we have a condition which demands immediate emptying of the uterus. Here, as in placenta praevia, we have hemorrhage obscuring the field of operation. If the separation occurs before

labor has started or very early in labor, before dilatation has begun, an abdominal section would seem to be the operation of choice. If labor is more advanced, a rapid dilatation of the cervix would be preferable to vaginal hysterotomy, with the difficulties attending the operation under these conditions. We do not think, therefore, that premature separation of the placenta can any longer be considered an indication for vaginal section.

Stenosis of the cervix due to some obstruction is usually recognized, either during the course of pregnancy or very early in labor. In such a case the patient would be a good risk for abdominal section. There would be no necessity of contamination by examination or manipulation per vagina. Furthermore, if a tumor caused the stenosis, the mass could be removed much better through an abdominal incision. In rare cases of stenosis due to scar tissue or some similar cause where attempt had already been made to dilate the cervix, the vaginal operation would be indicated as a last resort.

Eclampsia has been the most common indication for vaginal hysterotomy. This complication of pregnancy has probably been responsible for the operation in more instances than have all of the previously mentioned conditions. There is still a considerable difference of opinion as to the best methods of treating eclampsia. There are those who would empty the uterus by abdominal section in every case of severe eclampsia. There are the ultra-conservative who would always attempt to control the toxemia and convulsions by medication and elimination, and empty the uterus by induction of labor. It is not within the province of this paper to discuss the various methods of treating eclampsia. However, we all know that we have cases of toxemia in which the uterus must be emptied in the quickest manner possible, and by the method that will cause the least risk to mother and baby. Eclampsics are known to be poor risks for abdominal section and yet there are times when this operation seems to offer the best prognosis for both mother and baby. If, however, the baby is not full term and therefore small, or, if there has been manipulation per vagina, the vaginal hysterotomy might be the best method for rapidly emptying the uterus.

In addition to the indications already mentioned, we have a certain number of cases where

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ordinarily abdominal section would offer the best means of delivery, but where there has been considerable manipulation of the cervix in vaginal examination and attempts at dilatation. In these cases, vaginal hysterotomy, while not offering such a good outlook for the baby, gives the mother a much better chance of recovery than would abdominal section.

In *internal diseases* which endanger the life of the mother we feel that abdominal section would practically always be preferable to vaginal hysterotomy.

REQUISITE CONDITIONS FOR VAGINAL CAESAREAN SECTION

There are certain conditions which must be present before vaginal section is attempted. The pelvis must be of ample size and the baby not too large. The uterus must be mobile so that the cervix can be brought well down in the vagina. The tissues must not be friable or edematous. Sometimes, there is so much hemorrhage following the primary incision that the vaginal route must be abandoned. De Lee, of Chicago has reported such a case. If the above conditions are not favorable, the vaginal section cannot be considered, regardless of the indication.

With this brief resumé of vaginal hysterotomy and before concluding the discussion, we would like to report a case of eclampsia on which the operation was performed. We shall not describe the technique of operation except to mention some of the more important points.

ILLUSTRATIVE CASE REPORT

The patient, Mrs. S., lived in the country and was first seen by Dr. Goodrich of Sandyville. The physician was called about noon, February 7th, 1921, after the patient had had one convulsion. She had had two more convulsions and was in a state of coma when Dr. Goodrich arrived. Morphine was given and as the convulsions continued, the hypodermics were repeated about one hour apart until $1\frac{1}{4}$ grains were given. The patient was brought to Aultman Hospital, Canton. Past history was unimportant. Patient had had four children, oldest fifteen and youngest six. She was 38 years of age. All pregnancies and labors had been perfectly normal. Patient had felt fairly well up to the time of convulsion and had not considered it necessary to consult a physician. At this time, she was about six and one-half months pregnant. On arriving at the hospital at 6 P. M., the patient was still in coma.

Physical examination showed no abnormalities except as follows: The second heart sound was accentuated and there was a faint systolic murmur. Blood pressure, systolic 175, diastolic 115. Catheterized specimen of urine, four ounces obtained. Test with acetic acid and heat gave very heavy albumen. Temperature 96°. Pulse 84. Respiration 12. No fetal heart sounds were heard and no fetal movements were apparent.

As the patient was in fair condition, it was decided to induce labor with a Voorhees bag. The cervix was long and somewhat rigid but the os was open sufficiently to admit a two finger bag. A small weight, one to two pounds, was attached to the bag and intermittent traction was made every five to eight minutes. Hot packs were given every four hours. After fourteen hours, there was no further dilatation. The cervix was still long and rigid and no uterine contractions had occurred. The blood pressure was systolic 185, diastolic 115, and the patient was very restless. It was decided to do a vaginal hysterotomy.

Operation.—The cervix was pulled down and opened by anterior and posterior incisions. The mucous membrane was first incised and the bladder and peritoneum pushed up from the anterior wall of the uterus. The two great dangers are injury to bladder or peritoneum. A sound or metal catheter may be inserted into the urethra, if necessary, to make sure of the location of bladder. In enlarging our anterior incision, we opened the peritoneum about one centimeter. This was immediately closed by a purse string suture. The baby was delivered by version and extraction. It was dead, slightly macerated, and weighed about four pounds. The cervix was closed beginning with the posterior incision, and a small drain was left in the anterior wound. This was removed after twenty-four hours. There was considerable hemorrhage after the placenta was expressed, but as it gradually subsided, no measures were used to control it. It was considered that some hemorrhage would be beneficial to reduce the high blood pressure and toxæmia. A few hours later, an intravenous saline was given.

After the operation, pulse was 96, respirations 18, blood pressure systolic 122 and diastolic 85, but later blood pressure went up to 185 and 110 respectively. Treatment of toxæmia was started soon after the operation and the patient made a perfect recovery. She remained in a semi-conscious condition for twenty-four to thirty-six hours, and at first had to be restrained. It was almost a week before she became perfectly rational. Examination at five weeks showed all the incisions perfectly healed and the patient in good condition, blood pressure normal and urine showed only a trace of albumen.

CONCLUSIONS

In closing this paper, we would submit the following conclusions:

1. That the abdominal operation is preferable for many of the indications for which vaginal hysterotomy has been used in the past.

2. That vaginal hysterotomy is still of value to rapidly empty the uterus in one type of case; *e. g.* where there is reason to suspect contamination by vaginal manipulation or by unsuccessful attempts to dilate the cervix.

3. In every case conditions must be favorable for vaginal operation before it can be considered.

WALKER BLDG.

Progress in the Treatment of Syphilis*

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Editor's Note.—Animal inoculation of syphilis, coupled with the development of the Wassermann and improved tests have done much to promote progress in the treatment of syphilis. In addition the newer arsenicals have provided methods of treatment far more effective than any of the past and subject to test control during use. Which of these arsenicals will stand the time test of therapy remains to be seen. The duration of treatment, in the opinion of Dr. Ravogli, should be based on the clinical improvement in relation to the Wassermann reaction. A persistent Wassermann reaction with late syphilis offers a grave prognosis. In all probability serum fastness is at the bottom of so-called secondary infection. While there is some danger from arsphenamine treatment this cannot be entirely avoided, although complications and fatalities are fortunately infrequent. To be effective the arsenical preparations must be as toxic as possible to the noxious germs while remaining as innocuous as possible to the patient. Treatment has not yet arrived to a point at which mercury can be dispensed with in the therapy of syphilis.

I MUST say that the honor of being chairman of the Section of Dermatology, Urology and Proctology has been greatly appreciated by me, and I feel thankful to you. I welcome you to this meeting of the Ohio State Medical Society.

I will not miss the opportunity to address you briefly on the progress of our knowledge of Syphilis. If some years ago a physician would have spoken of a sero-reaction test to establish the positive diagnosis of syphilis, if he would have spoken of the demonstration of the *causa proxima* of the disease—the *spirocheta pallida*, and of a treatment capable of killing the spirocheta and of the ascertaining of the recovery, he would have been taken for a dreamer, and his utterances would have been laughed at. We had been taught that syphilis was a disease proper to the human race, and consequently not inoculable in the lower animals. We had been taught that syphilis when once taken could not be taken the second time. The only remedies for syphilis were mercury and iodides.

ANIMAL INOCULATION

Today all this has to be relegated to the pawnshop. All those previous assertions have been found wrong, futile and vain. In 1882 Martineau and Hamonic inoculated a young macaque monkey with syphilitic pus under the prepuce, and four weeks later, in the place of inoculation, two hard chancres appeared. These were followed by glandular swelling, the development of syphilides and later by ulceration of the soft and hard palate. In 1886 and 1888 Sperk inoculated 46 monkeys of different species, but only successfully in a few cases. He successfully inoculated an ape with the virus from the chancre taken from another monkey. But other experiments carried on by Mosse of Montpelier, Krishaber, Fournier and Barthelmy had no success. Likewise similar results had been obtained in the laboratories of Paris, Breslau and St. Petersburg.

In the Pasteur Institute, Nicolle successfully

inoculated a bonnet monkey *Macacus sinicus*, obtaining an indurated chancre, but not followed by subsequent manifestations corresponding to the secondary eruptions. Metchnikoff and Roux selected a chimpanzee, for the reason that his blood serum reacts exactly like the human blood. It was inoculated in the prepuce of the clitoris with the scraping of a human hard chancre, which had already produced glandular enlargement and roseola. At the end of a month the resulting sore was healing up showing a hard induration. The glands were involved, and one month after the appearance of the chancre, a papular eruption appeared on the dorsal and ventral surfaces of the trunk, and of the thighs. The discovery was then definitely announced by Metchnikoff and Roux of the successful experimental transmission of syphilis in the monkey. Not much later Schaudinn and Hoffmann announced the finding of the pathogenic agent in the form of a spirillum, which they called *spiracheta pallida* to differentiate it from *spirocheta refringens*. The transmission of syphilis to animals was confirmed by Lassar in a chimpanzee in the aquarium in Berlin and later by Neisser. It was found that the chimpanzee is susceptible to syphilis just like the man. It seems that the symptoms are not so severe as in the man yet in one case, they took malignant form of rupioid appearance, the animal passing into deep cachexia and soon dying.

IMPORTANCE OF THE WASSERMANN TEST

Here we stop for a moment to consider the importance of this discovery to suffering humanity and to society. In cases of doubtful diagnosis of chancre, when the spirocheta is present, the doubt is removed and treatment on scientific basis must be instituted immediately.

This is not all. It was also demonstrated in the blood serum that the presence of bacterial substances causing bacteriolysis as a result of immunization increased the contents of the amboceptor in the blood serum.

The discovery of antibodies in patients suffering with syphilis showed their reaction to the group of lipoids, so that by the addition of wash-

*Chairman's Address, read before the Section on Dermatology, Urology and Proctology of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4-6, 1921.

ed red corpuscles the complement is deviated and hemolysis more or less impeded. This remarkable phenomenon forms the basis of the Wassermann test for syphilis, which constitutes one of the most remarkable discoveries of modern medicine. It is the greatest aid in the diagnosis, so that what was guess work in former years may be made a certainty today.

The Wassermann reaction has revealed the enormous importance of syphilis as a causative factor of hitherto unsuspected morbid conditions. It is an invaluable aid in diagnosis in all periods of this infection, and also as a criterion for the effected cure.

THE NEWER ARSENICALS

For the treatment of syphilis only two remedies were known, mercury and iodides. How mercury acted nobody knew, and it has been only recently found out that its effect depends on the destructive action which it has upon the parasites. It is due to the genius and work of Ehrlich, that we owe the introduction of a poison into the system, which while innocuous to the organs of the body, is yet capable of disposing of the parasites,—*parasito tropic*. Hence come the arsenical preparations, which, by successive changes, have arrived at dioxydiamarsenobenzol. But we must not forget that if a strain of typanosome is continually treated with chemotherapeutic agents, a race of organism is developed, which no longer is influenced by this particular remedy, and become arsenic fast.

CLINICAL SYMPTOMS VS. PROVOCATIVE REACTION

One observation of great interest is the provocative procedure in the diagnosis of syphilis. It was first observed by Gennerich as provocation in the Wassermann reaction following an injection of arsphenamin. This was afterwards confirmed by Milian, but has been considered in a different way either as a normal variation, or as attributable to technical errors. O'Leary¹ states that provocation of serum reaction took place in 18 per cent. of the patients subjected to a provocative injection of arsphenamin. It has not given much help in obscure cases, while on the contrary in cases with manifest clinical symptoms, it did not show any reversal. Moreover in cases with a complete negative, provocative test, eight cases were found with positive evidence of syphilis in the spinal fluid. It seems that from the provocative injection of arphenamine we cannot expect to obtain certainty in the diagnosis of syphilis.

It is therefore rational to return to the study of the clinical symptoms. Stokes² after referring to the value of the laboratory test and to the positive microscopical demonstration, shows that often the clinician remains in perplexity if he relies entirely on these criteria. He justly argues that the field of clinical syphilology, instead of being closed, has just been thrown open anew. The works of Alfred Fournier, Jonathan Hutch-

inson, Sigmund von Ilanor, Prince Morrow and many others, must not be forgotten and remain as the cornerstone of the syphilological building for diagnosis, prognosis and treatment.

Lately many misleading responses have been obtained from Wassermann tests, and especially after an intensive anti-syphilitic treatment the W.R. has been found yet positive. These cases have been grouped under the nomenclature of Wassermann fast syphilis. Stokes and Bushman³ have made a peculiar study on 101 cases, which were apparently resistant infections. Patients had been treated with 12 intravenous injections of arsphenamine, and likewise with mercurialization. From the results obtained in other patients, it was conceded that those, who do not undergo reversal of the blood W.R. with this amount of treatment, show a peculiar resistance. Insisting upon treatment under such conditions will cause therapeutic injury, without reversing the blood Wassermann reaction. Craig advises that clinical examination, as a rule, be followed in these cases. Unfortunately the persistent positive Wassermann is found among patients who will show late syphilis of the internal organs. In fact 66 per cent. with persistent positive W.R. had aortitis, 60 per cent. myocardial changes; others were affected with neurosyphilis, and 40 per cent. suffered paresis; 50 had tabs and 10 cerebrospinal syphilis. In 17 cases with cutaneous manifestations, the Wassermann reaction kept on being positive. We can say that a persistent positive Wassermann may be found in cases in which the infection has been symptomatically arrested. But as a general rule it shows that the infection has taken deep roots and usually such patients will undergo the ravages of late syphilis in the most important organs.

THE NEWER THERAPY OF SYPHILIS

The teaching that mercury was the sovereign remedy against syphilis, has been shaken from its foundations. Arsenical preparations were studied and dioxydiamarsenobenzol was found capable of destroying the spirocheta, and of curing syphilis. Ehrlich believed syphilis could be cured with only one injection, but this anticipation was not realized. Anyhow its introduction has been a great achievement, and the preparation which obtained the verdict was 606, which afterwards was called salvarsan. As Charles E. Simon says, "this discovery was not the result of an accident, but the outcome of carefully planned experimentation carried to its logical issue." The newer preparation has the base of arsenic and it is now employed under the name of arsphenamine. This remedy has for its object the destruction of large numbers of invading organisms, and the consequent production of endotoxins, which may cause a local and a general Herxheimer reaction.

The employment of arsphenamine is made in a massive way to kill the spirochetæ, sacrificing

the immunizing and the resistance building power of the drug. This method calls for a concentration of the drug in the blood and tissues, to be maintained as long as the patient's organism can tolerate it. Arsphenamine is injected in a dose of one or two decigrams every day, or four decigrams every three days; and then resting for a few weeks, while using a mercurial treatment.

In the intensive treatment there are dangers from the accumulation of the drug, which may affect the vital organs, and from the *drug fast* spirochetæ, which escape its action. Moderate doses are more apt to kill spirochetæ than larger doses, as has been demonstrated by Katz. A series of six to eight injections is so continued, after which a rest of ten or twelve weeks is allowed. In primary and secondary syphilis a massive arsphenamine treatment is imperative in order to obtain its full spirillicide activity. If spirillicide action of arphenamine cannot be relied on entirely, mercury comes in with its protective action as the natural complement of the spirillicide drug. It has been considered by Stokes, Lomholt, Kissmeyer and others, as an immunity stimulator, in contrast to arsphenamine which acts as a spirillicitic agent. Moreover, in arsphenamine is found a tonic action which helps and relieves the depressant action of mercury.

In my practice in cases of primary syphilis, intravenous injections of arsphenamine, 5 or 6 decigrams, once a week, are given. Between times an injection of gray oil or of salicylate of mercury is given, which I have found always greatly efficient.

The employment of arphenamine accomplishes the destruction of a large number of spirochetæ, with a consequent production of endotoxines which may intensify the local and the general phenomena, and induce a Herxheimer reaction. The production of this reaction in the skin is marked by an erythematous eruption. When it occurs in the nervous system, it gives rise to symptoms of temporary or permanent impairment of the nervous functions as in the third, seventh and eighth cranial nerves. These nerves pass through apertures and canals in the bony structure, which do not admit of expansion. Modern studies have proved that there are spirochetæ with different properties and affinities. Some strains are called dermatropic because they have an affinity for the skin, others neurotropic because they invade the central nervous system causing tabo-paresis.

The most desirable method of treatment is that which diminishes the tendency to reaction, while destroying large numbers of spirochetæ. But it has to be followed by remedies which stimulate the resistance of the body to the invasion.

In tertiary or late syphilis arsphenamine also gives good results, but not with the wonderful activity displayed in the early forms. At this stage the spirochetæ are hidden and protected by in-

filtration cells and plasma cells, which involve the old resistant spirocheta.

Also at this period pathological alterations of the internal organs, of the vascular system, of the liver and kidneys may supervene and due caution must be exercised in the use of arsphenamine.

It is known that the liver may metabolize arsphenamine and store arsenic. Arphenamine is vasculo-toxic and it has to be used with caution in syphilis of the blood vessels and of the brain. In such cases it is better to depend on mercury and iodides, than to risk to have bad results.

Levin⁴ in such cases recommends the use of soluble salts of mercury—especially oxycyanide in 2 per cent. solution, beginning with 8 mims and gradually increasing the dosage.

At this point I cannot leave unmentioned a new therapeutic preparation—silver salvarsan, a compound containing, according to Kelle, 22.4 per cent. of arsenic and silver 14.1 per cent. Kolle considers this preparation the most powerful and efficacious so far provided. Noltén, Fabry, Hahn, Galewski, Boas and Kissmeyer abroad and Charles M. Watson,⁷ Major Medical Corps, U. S. Army, Parounagian,⁸ Fordyce, Stetson, Baketel⁹ and others in America, have treated many cases with silver salvarsan with encouraging results. It seems to have a superior efficacy in killing spirochetæ, and especially in the secondary stage two to four endovenous injections of 0.2 to 0.4 are sufficient to obtain good results. It is claimed that silver salvarsan contains two chemotherapeutically effective components,—silver displaying a catalytic effect on the salvarsan molecule, and arsenobenzol as a direct spirocheticide attacking with the arsenic the plasma of the spirocheta. Thus the silver acts as a restricting agent for the multiplication of the spirocheta. Silver salvarsan is twice as effective as salvarsan, and three times as effective as neosalvarsan. Mercury, in association with silver salvarsan, is not recommended.

DURATION OF TREATMENT

After six injections of arsphenamine, 3 to 5 decigrams, and after each injection of arsphenamine, one injection of mercury salicylate intramuscularly, we can call a pause, and it is time to take the blood W.R. This course of treatment may be repeated according to the result of the Wassermann reaction.

After twelve injections of arsphenamine and an equal number of mercury any case has to show a negative W.R. If the W.R. is still positive then we have to do with a case of W.R. *fast* syphilis. In these cases, as Stokes and Bushman maintain, to reverse the W.R. will require so much treatment as to cause therapeutic injury instead of benefit. In the same way Kaplan thinks it to be injurious to reverse the W.R. in such cases by persisting in intensive treatment. Craig emphasizes the importance of clinical examination

before the persistent positive W.R. is considered an insignificant symptom. However a persistent W.R. was found among patients with late syphilis, cardiovascular syphilis, myocarditis, neurosyphilis, tabes and paresis. In a general way resistant syphilis is grave and prompts a serious prognosis.

SERUM FASTNESS AND SECONDARY INFECTION

Ehrlich has shown that during the process of immunization spirochetæ may develop a serum fastness. Drug fastness does not depend on the atrophy of the receptors, but on changes in their structures, so that changing the quality of the arsenical product, the parasite may be lead to its destruction. The discovery of the elements of fastness, or resistance on the part of the microorganisms explain, why a syphilitic cannot be reinoculated with syphilitic virus, while the disease is still active. The spirochetæ strains in the body of the syphilitic are fast strains, and antibodies are present in the blood, which dispose of the freshly introduced strains.

Cases of syphilitic indurated chancre without evident secondary eruptions, with a negative W.R. have to be taken into serious consideration. In these cases the 8th nerve is often affected, and usually the central system has been invaded.

As stated in the beginning we had been taught that syphilis could not be taken a second time in life. This has been found untrue, and today, especially after the salvarsan treatment, cases of reinfection are more frequently seen. Yet as Blaschko has said, syphilitic reinfection has given occasion to many errors. That the serum taken from an ulcer containing spirochetæ when inoculated in the same man has produced another ulcer it is not convincing proof of reinoculation. In some cases an ulcerated gumma may impose for a new chancre, showing all the characters of the initial lesion. In some cases the old syphilis has not been entirely destroyed, no symptoms can be found, and the chancre has been considered as a result of reinfection. It has been claimed that after an energetic treatment with salvarsan, at the time of the appearance of the hard chancre, without secondary eruptions with negative sero-reactive, reinfection can take place. Leven⁵ raised this question if a sure cure can be obtained in syphilis without an abortive treatment. He shows the difference between an early treatment, and an abortive treatment, which are entirely different. The prospects for a patient, who has been treated from the early beginning, are much better, than for one who has waited for the secondary manifestations. Yet as Levin has stated, a man who had a chancre and received intensive treatment and has remained free from secondaries, with a negative W.R. of the blood serum, cannot be declared cured. In many cases with a negative W.R. of the blood serum, the spinal fluid, cytologically and serologically, may give positive signs.

A man with innumerable spirochetæ in his

body, hidden by metastasis in various organs, shows no signs of being sick. But just as the spirochetæ once cease to be innocuous in the tissues, they may again show their deleterious action.

For this reason the treatment of syphilis cannot be standardized, without the danger of serious errors, but it has to be directed according to the symptoms and to the general health of the patient.

DANGERS OF ARSPHENAMINE TREATMENT

It is interesting to consider whether there is any danger to the patient in the administration of arspenamine. From a report of the Salvarsan Commission from the Association of the General Practitioners, given by Meirowski, in Koln, and published in the *Münchener Medizinische Wochenschrift*, 1920, No. 17, the results are greatly reassuring. Among 13,000 injections with old Salvarsan, 40,954 with sodium salvarsan and 171,826 with neosalvarsan, all together 225,780 injections, 20 cases of death have occurred, which is 1 death in 11,289 injections. Of these fatalities it can be stated, that death was unavoidable in 1 of 56,445 cases. With the old salvarsan deaths were 1 in 13,000 probably less; with sodium salvarsan, when the limit of the dose did not exceed 0.6, fatal cases registered 1 in 20,000. When the dose was above 0.6 cases of death registered 1 in 1,250. In the administration of neosalvarsan only 1 case of death had occurred in 162,972 injections and 1 in 3,000. Cases of death after injections of salvarsan have been observed in primary and secondary syphilis. Half of the fatal cases have happened after the second and the third injection. Encephalitis, generalized dermatitis, icterus, yellow atrophy of the liver, albuminuria have been the morbid forms which caused the various deaths. In most of the cases excessive doses had been administered, and in some instances had been combined with mercurial preparations. But it seems that mercury cannot be blamed, but that the fault rests with salvarsan.

SYPHILITIC NEUORELAPSES

Syphilitic neuorelapses are seen mostly after a too short or an insufficient course of treatment.

To summarize I may say that the finding of spirocheta confirms the diagnosis; the sero-reaction gives us the ideal knowledge regarding the progress of the treatment, while arspenamine poisons and eliminates the spirilla producing the disease. Yet we must always insist on the prophylaxis of venereal diseases. When the disease has been unfortunately taken an immediate treatment is necessary to eliminate the spirochetæ and give them no time to infect the whole system.

The arsenical preparations are the only ones capable of ridding the system of the noxious germs. The W.R. test will tell us how to continue

the treatment, but we must not forget the old clinical symptoms, which can tell us as much as the sero-reaction. Arsphenamine is the greatest remedy to kill spirochetæ, but mercury is yet a powerful remedy to be used with arsphenamine. During the late stages of syphilis when infiltrations are present in the form of gumma, periostitis and connective tissue sclerosis, iodide of potassium has to be used in association with the other great remedies.

By the reducing action of the iodides on the plasma cells and on the infiltrating cells, the spirochetæ are placed in condition to be reached by the spirocheticide remedies, and to be dealt with and carried away from the organism.

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Syphilis in Its Relation to Medical and Surgical Diagnosis*

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Editor's Note.—It has been Dr. Dunham's observation that half of the physicians, who refer cases, are almost insulted if syphilis is suggested as a probable diagnosis. Irrespective of any family or sociological complications it is for the benefit of all concerned to clear up a diagnosis of syphilis. So great is the importance of latent syphilis that no physician should ever arrive at a diagnosis in an obscure case, or undertake an operation without having a Wassermann and when possible a Hecht-Weinberg-Gradwohl test performed. This latter test, in the experience of Dr. Dunham, has caused fewer mistakes in diagnosis. The importance of this matter is emphasized by the fact that diabetes, duodenal ulcer, neurasthenia, cholecystitis and even Graves' diseases have been found to be accompanied by strongly positive reactions to syphilis. Frequently spinal puncture will help to clear up the diagnosis in patients with obscure nervous symptoms, when the blood serum test is negative.

THE topic under discussion has no connection with the syphilis of the dermatologist or the syphilographer. It has nothing to do with chancre, the secondary macular appearances nor to the external skin lesions seen in tertiary lues.

My purpose is to call your attention to the frequency of latent syphilis in which the spirochetes are imbedded in the central nervous system, the heart, or some of the other viscera.

DIFFICULTIES BESETTING THE DIAGNOSIS OF SYPHILIS

Unfortunately for the victims and for physicians, very little has been written, in an available form, upon this phase of the subject. In spite of the now classical utterance of the late Sir William Osler—"Know syphilis in all its manifestations and relations and all other things clinical will be added unto you"—this topic is not at all popular with the family physician.

It has been my observation that half of the physicians who refer cases are almost insulted if syphilis is suggested as a probable diagnosis in one of their patient friends.

Then again the average physician dislikes to have his patient told he is luetic. Another ob-

stacle to treatment of latent cases is the sociological aspect.

If you arrive at a positive diagnosis in a virtuous wife and the husband tells you he has suffered several attacks of gonorrhoea but never had any lesion which may even be suspected as a chancre, your problem is difficult.

AN ILLUSTRATIVE CASE

In such instances the wife's family history may be an aid. A recent case is illustrative:

CASE 1.—A married woman 26 years of age, who had two miscarriages, was treated for many years for neurasthenia. Incidentally a very capable ophthalmologist, who is usually alive to the possibility of syphilis, treated her unsuccessfully for three years in an effort to overcome a muscular imbalance.

No Wassermann test was made. She was referred to me for a gastric disturbance which presented a typical clinical picture of gastric ulcer. The routine examination of the blood revealed both a 4 plus Wassermann and Hecht-Gradwohl reaction. Anti-luetic treatment has cured her apparent gastric ulcer and muscle imbalance, and has at least improved her neurasthenic condition.

In this case a family discussion was saved by elucidating the fact that her father was an invalid for several years with dyspnoea, heart

*Read before the Section on Medicine of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4-6, 1921.

disease, nephritis, and that he finally died at 45 years of age with paralysis of the throat, a train of symptoms doubtless syphilitic.

This woman's lues was probably congenital. In many instances the problem is not so simple, and it is necessary to treat the patient without disclosing the diagnosis. The present day practice of using some sort of serum for many ailments is an aid, for the public has learned that serum may be used for diseases other than syphilis.

THE IMPORTANCE OF LATENT SYPHILIS

A positive Wassermann, as diagnostic evidence in obscure cases of latent syphilis, was formerly criticised by some clinicians, who are skeptical about the interpretation of the test. This has, however, been answered by the work of Aldred S. Warthin, of Ann Arbor.

As is well known, his brilliant studies have shown the presence of spirochetes in the heart muscle, the aorta, the liver, and in certain ulcers of the stomach.

So great is the importance of latent syphilis that no physician should ever arrive at a diagnosis in an obscure case, or undertake an operation upon the abdominal viscera without first having a Wassermann and when possible a Hecht-Weinberg-Gradwohl test performed.

Diagnoses of cholecystitis and even appendicitis have been made when latent syphilis with angina abdominis has been the etiologic factor.

For many years it has been my practice to subject every patient to a Wassermann test if there seemed to be any doubt as to the presence of syphilis. This period of observation presented some very great surprises. Diabetes, duodenal ulcer, neurasthenia, cholecystitis and Graves' disease were, at times, found to be accompanied by strongly positive reactions for syphilis. In most instances the illness was cured by antiluetic treatment.

During the last two years the Hecht-Weinberg-Gradwohl test as well as the Wassermann test has been used as a routine in the examination of every patient whether or not there is a suspicion of lues. This routine does not include such cases as pneumonia seen in consultation.

In my observation the addition of the Hecht-Gradwohl test, which is more delicate than the Wassermann, has caused fewer mistakes in diagnosis.

This newer reaction as modified by Gradwohl surely has a legitimate field in the diagnosis of latent syphilis, and also as a guide in treatment.

Several cases in my series had persistently negative Wassermanns with various antigens and positive Hecht-Weinberg-Gradwohl reactions. Invariably these patients responded to the therapeutic test.

Latent syphilis should be diagnosed in the absence of a positive Wassermann and the presence

of a 4 plus Hecht-Gradwohl test, if the clinical signs are fairly convincing.

Particular attention should be given to patients who present typical clinical pictures of so-called hyperthyroidism and duodenal ulcer.* Cures have been effected in such patients without operation merely by the painstaking use of mercury and arsphenamine.

The cause of many ailments treated as profound neurasthenia will be found in a neurosyphilis as shown by a high cell count and positive Wassermann in the spinal fluid.

Spinal puncture should be performed upon patients with obscure nervous symptoms, if the blood serum Wassermann is negative.

This method of examination is very important and if done with a needle of small calibre will produce no distressing sequelae.

Every patient recently infected with lues should be subjected to a spinal fluid examination before treatment is even temporarily discontinued.

Fewer tabetics would be seen if the above procedure were followed.

INCIDENCE OF SYPHILIS IN A SERIES OF REFERRED CASES

The frequency of a given disease can be measured by statistics more intelligently if the source of the material is known.

The cases in this series represent patients referred for diagnosis by the family physician or surgeon. The significance of the last statement lies in the fact that one or more physicians have made an unsuccessful attempt at diagnosis in each case.

Possibly this series of cases presents more latent syphilis than the routine of a general practice but the variation in my opinion would be slight.

AMONG THE LAST 778 CASES EXAMINED BY ME

68 were found with a 4+ Wassermann.....	8.7%
20 were found with a doubtful positive.....	2.5%
(± or 1 + positive)	
17 were found with a 2+ Wassermann.....	2.2%
4 were found with negative Wassermann	
and 4+ Hecht-Gradwohl.....	0.5%
	13.9%
30 were clinically diagnosed visceral or	
neuro syphilis with negative Wasser-	
mann and Hecht-Gradwohl.....	3.8%
139 Total.....	17.7%
2 Deduct doubtful positive Wassermann	
which did not prove clinically and ther-	
apeutically to be syphilis.....	1.25%
137 Per cent. of latent syphilis.....	16.45%

*"Errors in Diagnosis and Treatment of Duodenal Ulcer." by John Dudley Dunham, Am. Jour. Med. Science, Nov. 1920.

VARIOUS DIAGNOSES

Among the 4 plus positive cases 7 had given diagnoses of cholecystitis, although one resembled gastric crises rather closely; 14 had neurosyphilis, 1 had myocarditis, 6 presented headache as their only symptom, 11 had specific aortitis, 17 had symptoms simulating gastric or duodenal ulcer, 7 bronchitis which had been diagnosed pulmonary tuberculosis, one was even suffering from pulmonary hemorrhage, and 1 each had nephritis, rheumatism, iritis and malnutrition.

Among the patients with doubtful Wassermann, 2 were proved to have other diseases and 10 showed, after treatment, a strongly positive reaction; 8 remained doubtful although showing by therapeutic tests the correctness of the diagnosis.

The most puzzling cases are those with apparent duodenal ulcer. Even the barium meal when observed at the pylorus and in the cap will show very suggestive shadows.

Three cases have come to my attention in which gastro-enterostomy had been done without success and complete recovery was brought about by anti-luetic treatment.

The majority of patients with apparent duodenal ulcer due to syphilis should have medical treatment with rest in bed combined with mercury and arsphenamine to bring about a cure. No doubt some of them have actual ulcers in the duodenum with spirochete infection and need both forms of treatment.

The patients with neuro-syphilis had usually been treated for hysteria or profound neurasthenia and exhibited changes in the reflexes of sufficient importance to suggest lues.

Cases of cephalalgia with positive reactions are frequently found associated with pyorrhoea and root abscesses or with intestinal stasis.

In such instances one should not expect cures merely by attention to anti-syphilitic treatment but should also resort to measures which will relieve the associated conditions.

One patient presented himself with a diagnosis of pulmonary tuberculosis. He suffered from a harsh metallic cough with a very slight mucopurulent expectoration.

Repeated tests of the sputum showed no acid fast bacilli. A stereo-roentgenogram of the chest indicated no evidence of tubercular invasion, although the aortic arch was slightly enlarged.

The patient had been treated with autogenous vaccine without improvement. He admitted that as a student in Paris he acquired a hard chancre but had suffered no later lesions.

The Wassermann and Hecht-Gradwohl tests were 4 plus positive. Active treatment with mercury and arsphenamine soon caused a disappearance of his cough, which has not recurred in 8 months after treatment.

NEGATIVE TESTS

A large volume of contributions has been made

as to the significance of complement fixation tests. There is, however, rather a fixed notion in the mind of the average physician that a negative Wassermann indicates an absence of syphilis.

In my series 30 patients were diagnosed as having latent syphilis in the absence of positive reactions; 28 of this number were proved therapeutically to be syphilis, though the Wassermann and Hecht-Weinberg-Gradwohl test remained negative throughout the treatment.

A negative Wassermann is only of value as an indication of the progress in treatment.

In some instances the Wassermann reaction may remain negative through the entire course of latent syphilis.

A notable instance occurred in a man with a severe stomatitis. He was quickly relieved by mercury, and has remained free from trouble after 4 intra-venous injections of neo-arsphenamine.

Repeated tests of blood serum including one made an hour after the intra-venous treatment showed a clean negative Wassermann and Hecht-Gradwohl reaction.

TREATMENT

More intensive treatment over a longer period of time is required in latent and visceral lues than in recently acquired cases.

Mercurial inunctions or mercuric chlorid by mouth in 1/10 grain doses three times daily should be employed for two months.

This is followed by neo-arsphenamine at ten day intervals for five doses. At this time if the clinical symptoms have subsided and the complement fixation tests upon the blood and spinal fluid are negative, treatment may be discontinued for three months. After this interval the same treatment should be repeated.

Results are often surprisingly gratifying after intensive treatment in latent lues.

327 E. STATE ST.

In the course of investigations designed to establish the path of absorption of botulinus toxin in guinea-pigs, a number of animals were kept under ether for the purpose of surgical manipulation. It was observed by Jacques Bronfenbrenner and Harry Weiss, Boston (*Journal A. M. A.*, June 18, 1921) that death was greatly delayed in such animals following the introduction of large amounts of toxin. The question at once arose whether advantage could be taken of this delay in the rate of the progress of botulinus intoxication under ether anesthesia to permit toxin-antitoxin combination to take place. Various experiments were made and the correctness of the theory was established. In addition to this direct effect of anesthesia on the progress of intoxication, attention is called to two other beneficial factors. The patient throughout the progress of botulism remains conscious of his condition and apprehensive of its significance. Anesthesia for a time relieves this mental distress. Moreover, as the amount of toxin ingested is unknown, it is advisable to give very large doses of antitoxin intravenously. Etherization is known to counteract the tendency to anaphylactic shock.

Tumors of the Corpus Callosum*

EDMUND M. BAEHR, M. D., Cincinnati

Editor's Note.—While tumors of the corpus callosum are rarely encountered they have occurred in sufficient number to provide data for establishing a diagnostic syndrome and it was from the evidences of such a syndrome that Dr. Baehr, was able to determine the presence of a soft, non-expansile cerebral neoplasm in the case coming under his observation. This tumor was very strictly limited to the corpus callosum and hence its symptom complex did not include those symptoms due to an extension of the process and to pressure upon distant parts. While Bristowe's syndrome still stands, Dr. Baehr is inclined to modify it as follows:—Tumors of the corpus callosum show disorders of intelligence; absence or insignificance of signs of increased intracranial pressure; absence of definite evidence of tumor of the frontal lobe and absence of paralytic or convulsive phenomena, until by encroachment motor and sensory pathways or cranial nerves are affected.

IN this brief description of a case of tumor of the corpus callosum and discussion of the relatively few cases to be gathered from the literature I shall refrain from going into minute detail and from citing the authorities. This study is part of a larger investigation of Mid-line Tumors of the Brain that is in the course of preparation and these data will be supplied therein.

Suffice it to say, for the present, that although relatively rarely encountered, tumor of the corpus callosum has occurred in 35 cases described prior to 1917 when I collected them. Sufficient data is at hand, therefore, to discuss a syndrome, admittedly vague, yet of sufficient value to merit consideration. Permit me here to recount the history of a case seen by me a few years ago:

CASE REPORT

History.—Mr. A. B., aged 65 years, of exemplary habits and of previous good health, suddenly fell to the floor in collapse, which was regarded as a fainting spell. He did not rally very quickly and he was taken to his home. There was loss of consciousness for a brief time but, it appears, he had recovered fully soon after reaching his home. The next day he appeared quite himself again and returned to his office. Nothing unusual was observed there for a few days but before a week had elapsed the patient was evidently confused and disoriented, out of touch with time and events, handling business matters today that he had completed yesterday; hiatuses of entire days occurring in his memory. It is probable that he was slightly irritable at this time and he appeared worried. He was returned to his home where this mental state became progressively worse losing interest in his business and his surroundings.

Mental State.—His mental state at that time may be briefly described as a rather rapidly advancing soporific stupor with loss of all spontaneity and interest, accompanied by a strange expression of confusion and daze. He was very

gentle and docile, obeying all requests without question. In fact he questioned nothing; his discrimination disappeared very early. This was revealed by his fashion of dining. He would eat any food placed before him in more or less automatic manner. Indeed, it would appear that courses might have been repeated during the meal without making impression upon him. He would sit for hours apparently reading the paper and, perhaps, never turn the sheet. In the early days of his illness he would semi-automatically play solitaire with cards but this became more and more unsuccessful. For several days he was able to reply in simple fashion to my questions; he knew me and seemed to have some insight into his difficulties. He knew his family and me by name but he seldom, if ever, initiated conversation. His family observed an unusual thirst about this time, the second or third weeks and shortly afterward he lost control over his bladder and became unable to defecate.

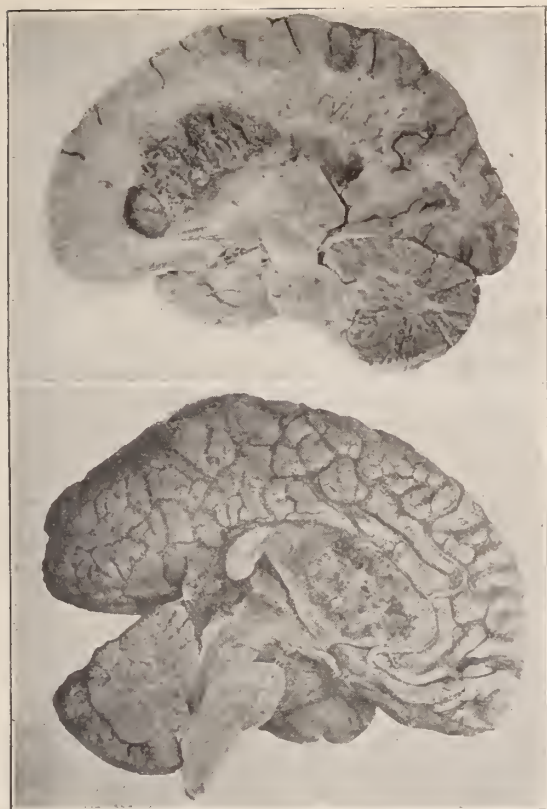
Physical Examination.—My notes concerning his physical examination are as follows: General state of nutrition excellent. He was very well developed and nourished. Physical examination of his heart and lungs revealed nothing abnormal. His blood vessels were soft and elastic; his general blood pressure 120 m.m. His urine was normal in quantity and quality.

Neurological status.—Station and gait perfectly normal before he became too feeble to stand. There was no weakness or wasting of any muscles; reflexes all remained intact; coordination was nowhere impaired. Cutaneous sensibility, likewise, appeared unimpaired although it may be possible that it was generally blunted. There was incontinence of urine and inability to empty the bowel unaided.

Cranial nerves, likewise, were all intact, including the olfactory nerves. An olfactory examination made early in the course of the process was quite satisfactory. Later he was unable to cooperate.

His discs were clear and the retinal vessels normal. This statement is true for the first half of the duration of the disorder when I attended him. I am unable to say what was their condition in the second half.

*Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4-6, 1921. From The Department of Neuro-Psychiatry, University of Cincinnati School of Medicine.



Tumor of the corpus callosum. Case A.B. 1913.

DIAGNOSIS

As a result of this examination and influenced, very largely by the history of the development of the case, I ventured the diagnosis of a soft, non-expansile cerebral neoplasm and located it in the frontal lobes although I was loathe to do so without Foster Kennedy's invaluable signs of one-sided optic neuritis and atrophy.

The absence of symptoms of increased intracranial pressure made necessary, of course, the considering of other possible causes. The only other possibility, in my mind, was arterial thrombosis with infarct formation, but this must have caused much more definite localizing signs than were present in the case. Moreover, the absence of signs of increased intra-cranial pressure no longer impresses me sufficiently to interfere with my considering cerebral tumor in the matter of diagnosis.

This diagnosis with its fatal prognosis was not satisfactory to the family. Following immediately thereupon an examination of the discs was made by an expert who underscored in his report, *discs and periphery normal* and decried the possibility of tumor. The physician who succeeded me regarded the case as a depressed psychosis of some sort and gave a favorable prognosis.

POST-MORTEM FINDINGS

In the course of a few weeks the patient became more and more stuporous and died without

ever having paralysis or convulsions. His son permitted an examination of the brain by me and the large tumor, illustrated by the accompanying photographs, was discovered.

This was a spongy tumor almost strictly confined to the corpus callosum and perfectly symmetrically distributed to the right and left, extending bilaterally over the striate bodies into the white substance of the frontal lobes. It proved to be a small spindle-celled sarcoma when examined by Dr. Charles Kiely, of Cincinnati.

DISCUSSION OF SYMPTOMATOLOGY

A careful study of all recorded cases reveals none so strictly limited to the corpus callosum as this. It is important to bear this in mind for in the attempts to make a symptom complex for tumors of this site the difficulty has been to exclude those symptoms due to extension of the process and to pressure upon distant parts.

Among the various symptoms described in these cases are hemiparesis, hemiplegia, quadriplegia, convulsions and others. It is of physiological and pathological interest to determine whether these may be due to destruction of callosal commissural fibers or whether they are due to impingement upon other structures. It is not out of place at this moment to recall the effects of stimulation or section of the corpus callosum in lower animals. Mott and Schafer declare that stimulation of the corpus callosum from before backwards results in movements successively of the eyes, head, arms and legs. This has been refuted by a number of investigators. Koranyi has sectioned the organ and no paralysis ensued. Erb as well as Ferrier sectioned the structure in monkeys and failed to observe any subsequent sensory, motor, coordination or intelligence disorders. What is of equal significance is the fact that Forel once observed complete agenesis of the structure in an idiot; another similar case was observed by Sir James Paget, and the patient presented no symptoms whatsoever. Mr. Alexander Bruce made a similar observation, then collected fifteen cases in which the structure had been found missing without having produced any symptoms.

It appears reasonable to believe, therefore, that the paralytic and convulsive phenomena depend upon encroachment of the tumor upon other structures, motor, sensory or the cranial nerves. In my case the encroachment was, if any, forward into the white tissues of the frontal lobes. With complete destruction of the corpus callosum, therefore, no paralysis or convulsions ensued.

THE SYNDROME OF BRISTOWE

As a result of very careful study of groups of these cases various authors have endeavored to formulate a symptom-complex, but the difficulty, it seems to me, has been the incorporation of these symptoms due to the encroachments. Nevertheless, the syndrome of Bristowe, called by him a

probability diagnosis possesses very considerable merit. It is as follows:

1. A gradually increasing evidence of cerebral involvement.
2. Absence or relative insignificance of signs of increased intracranial pressure.
3. Deep disorders of the intelligence, characterized by an unusual type of stupor and peculiar, non-aphasic speech defects.
4. Absence or infrequency of impairment of cranial nerves.
5. Hemiparetic manifestations with, possibly, slight impairment of the opposite side.

CONCLUSIONS

The intellectual disorders stand out prominently

in all cases: Progressive loss of spontaneity, well-defined memory disorders, interruption to normal sequence of ideas, loss of discrimination but a conserving of intelligence until late in the course of the process. This is so distinctive that I feel permitted to offer even a briefer syndrome than Bristowe's as follows:—

1. Disorders of intelligence of this type.
2. Absence or insignificance of signs of increased intracranial pressure.
3. Absence of definite evidence (Kennedy's sign) of tumor of the frontal lobe.
4. Absence of paralytic or convulsive phenomena until, by encroachment motor and sensory pathways or cranial nerves are affected.

WILSON AND RICHDALE AVES., CINCINNATI.

Intravenous Administration of Protein in the Treatment of Arthritis*

C. W. WAGGONER, M. D., Toledo

Editor's Note.—That intravenous vaccine therapy does produce marked results in the recipient is evidenced by chill, fever, sweating and change in the blood picture. While Dr. Waggoner cannot as yet disclose the blood change causing the favorable reaction, it seems to be one of colloidal chemistry, involving surface tension of ions and cell irritability. In Dr. Waggoner's practice the inaugural average dose for treatment is 20 to 50 millions of dead typhoid bacilli, depending upon the age, size and robustness of the individual patient. The diet should also be regulated and other assisting measures should be employed. The cases to be treated must be acute or chronic infective joint lesions. In acute cases, Dr. Waggoner has found marked improvement and cure in 50 per cent. of cases after one to five injections, given each third or fourth day and in these cases there have been no complications. In 50 per cent. of acute cases with recurrences, if foci of infection have been destroyed, more treatment will usually clear them up. Ten per cent. of chronics are made practically normal; 80 per cent. are improved and 10 per cent. remain unchanged under intravenous protein therapy.

THE object of this paper is to stimulate renewed interest in the observation and treatment of a condition that has weighed heavily upon the human family and has extracted its toll in suffering and destruction of efficiency to no secondary degree,—arthritis.

In discussing the treatment of patients with arthritis, it becomes vital, as in all other conditions, to lay great emphasis upon the history of the case and nature of its manifestations, this being necessary for the differentiation of the infecting organism and consequent prognosis of the disease. Let me repeat, we must be most careful of our diagnosis of the condition to be treated, determine that it is an infective process—*per se*, and if possible the kind of infecting organism. This is for two reasons principally:

- (1) This treatment is not pleasant for the patient.
- (2) Absolute failure to produce some beneficial results is not desired by any one.

ELIMINATING OTHER COMPLICATING FACTORS

To this end, in the treatment of our cases, we

have been very careful to eliminate malignancy, previous injury, congenital deformity, central nervous system disease, and anything of a nature foreign to what we wanted to treat, always of course taking into consideration other infective processes going on in the patient to be treated, such as teeth, sinuses, tonsils, ears, gall-bladder, prostate, heart and pelvic female organs. Also we try to determine whether the condition has progressed to such structural change in bone substances as to be a focus of infection in itself.

Obviously we have always cleaned-up all possible foci of infection where that could be accomplished. All but four of our cases had definite areas which could produce the necessary organism to cause the manifestations which were treated.

TYPES OF CASES TREATED

There were treated 136 patients, 92 males and 44 females, presenting pathological conditions as one would expect,—acute arthritis of one to many joints; chronic arthritis of two or more joints with bone change; chronic osteoarthritis; disturbances of arches of feet with inflammatory processes in articulation of bones of feet and gonorrheal arthritis. There were 86 male pa-

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tients with chronic infective joint involvement. Six male with acute infective joint involvement. Forty female patients with chronic infective joint involvement and four with acute infective joint involvement. Three male patients had chronic gonorrheal joint involvement.

THE NEWER THERAPY OF ARTHRITIS

As we go over the history of the treatment and care of arthritis cases in medical annals, we find ourselves, unless this present treatment proves efficacious, in a pretty helpless state. It is claimed by many that sodium salicylate does not arrest the process or prevent complications, and the use of all other agents of similar nature has long ago been discontinued. Heat, hydrotherapy and massage have been just as ineffective *when used alone*, so that our clinicians and research workers were fighting a real fight for some development along a curative line.

Perhaps not until Rosenow disclosed the results of his study in cases of arthritis did a new field of therapy open to a greater degree and more men in a larger way began to treat arthritis somewhat differently than before, not with any new substance, but with just a different application of an already known product and we arrive at the time of vaccine and protein therapy in treatment of this condition.

It is not necessary for me to go into the history of specific vaccine-treatment given by intramuscular and subcutaneous injections with their slight reactions or none at all, though sometimes, if continued long enough, producing favorable results in a very limited number of cases. That is now a familiar story to all.

But what we are interested in now is: How may we prepare a vaccine (dead bacteria) or protein (dead bacteria or any organic or vegetable protein) so as to administer the same *intravenously* and get beneficial results.

Joseph L. Miller says that the only way to determine the effectiveness of any therapeutic measure, especially such a measure as this, is the interpretation of results clinically after treatment of many cases.

In 1892 Fraenkel treated 57 cases of typhoid fever with killed typhoid bacilli.

In 1912 Kraus and Mazza treated typhoid fever intravenously with dead typhoid bacilli.

In 1910 Schmidt called attention to increased resistance of the body to variety of common infections following any form of vaccine therapy.

Ludke used a 4 per cent. solution of duetro albumose intravenously with the same result as vaccine.

TYPHOID VACCINE FOR PROTEIN THERAPY

1. Make transplant of active typhoid culture on several (3-5) tubes of Loeffler's Blood Serum.
2. Incubate 24 hours.
3. Remove typhoid bacilli growth by pouring small amount of sterile 0.5 per cent. phenol in

normal Nacl solution into culture tubes and scraping surface lightly with platinum wire, pour this emulsion into one large test tube.

4. Agitate emulsion for several minutes to break up any clumps of bacteria present.

5. Dilute emulsion to desired strength by adding 0.5 per cent. phenol in normal Nacl solution, bacilli being counted in usual manner.

6. Bottle in sterile container.

7. Resterilize by placing containers in water bath at 60° C. for one hour.

8. Make transplant of finished product on suitable culture media, incubate and strain resulting growth. Examine to see that no foreign bacteria or spores are present.

Mittlander used 1 cc. of caffeine and 10 per cent. camphor and within 15 minutes his patients had a chill followed by a rise in temperature. The Germans are using boiled milk, showing that any foreign protein will produce reactions and results and that there is no specificity.

METHOD OF INTRAVENOUS PROTEIN THERAPY

Depending upon the age and size of the patients and their physical condition; and having had proper preliminary care as to food, quiet and warmth, we usually start with an injection of 20 to 50 million killed typhoid bacilli, increasing the dose until we reached 75 to 250 million bacilli, in solution prepared by ourselves or as a sero bacterin prepared by a commercial house. From 20 minutes to one hour after injection, patients experience a chill, usually severe in character, (we have had no results unless patients had a chill) and lasting 30 minutes to one hour, (sometimes patients have had four chills of like severity in the following five hours), after which temperature rises to 104° or 105° F, (we have had best results when the temperature ran high), lasting two to four hours.

Dr. J. L. Miller has had cases in which the temperature persisted for two days. There may be nausea, vomiting, diarrhoea and severe headache. After the temperature declines the patients sweat, and in an acute case or in chronic cases with acute exacerbations, patients are free from pain and may remain so permanently, or for at least 48 hours. A herpes usually develops on the lips in the first 48 hours and persists from four to five days. During chills the blood pressure may rise 20 to 40 mm. of Hg.

BLOOD PICTURE

Following the injection there is at once a slight leukocytosis which drops to normal during the chill. A few hours after chill leukopenia, to a marked degree, develops. This may go as low as 2,400 W. B. C. in some cases, the reduction being in polymorphonuclears, and this is followed by a leukocytosis of polymorphonuclear type which reaches its apex in 24 to 48 hours. We have had a leukocytosis as high as 60,000 W. B.

C., (the greater the reaction the better the results).

In the red cell count our findings followed pretty closely those of Cowie and Calhoun. Myelocytes were pretty constantly found; nucleated red cells were found in about 33 per cent. of cases; a large number of platelets and atypical cells appeared following reaction. It seems also that the above red blood picture is necessary for good results.

MECHANISM OF BENEFICIAL EFFECT

What change takes place to produce the above results? Jobling and Peterson say:—

"It seems probable that the fundamental change on which the majority of these biologic reactions are based is one of colloidal dispersion, in that the injections bring about a less dispersed state affecting not only the serum proteins but also the serum lipoids. Such an alteration is sufficient to account for the fluctuations in the fermentantiferment balance and in the coagulation mechanism, as well as in the complement powers of the serum, although it does not at present explain the antibody titer. With this as a basis, we can understand that so many and diverse substances can bring about a reaction almost identical clinically and therapeutically. But here, as in so many other biologic problems which have to do with that most complex tissue, the blood, it seems probable that no single factor can be identified as responsible for all changes which occur, but that a whole train of events is inaugurated when the equilibrium of some of the delicate serum balances is disturbed, all of which tend toward a condition favorable for recovery from infection."

As yet we cannot in a practical way demonstrate just what change takes place in the blood stream and how this change is produced. What there is, that administered in such small amount, will produce such a general change in an individual as to almost resemble surgical shock and extremis and in a few hours later will have changed the subject to one having a feeling of well-being and much improved over the previous condition, we can only surmise; suffice it to say that this does occur and we must again revert to our clinical results to justify the use of such remedial measures.

MEASURES

In applying these measures we must not promise our patients any great results. There is no way in which we may tell in advance how much or how little can be done for an involved joint. Usually a history of long standing ankylosis or exostosis indicates an unfavorable prognosis. Still Case No. 36 was unable to walk for 26 months and was in bed for 18 months with ankylosis of both knees and exostosis on the internal aspect of the right knee joint five centimeters in diameter, all verified by X-ray, and

notwithstanding this, after ten injections given every fourth day, he was able to drive his car without help; and with massage his joints became nearly normal. There are ten other cases in this series with a similar history and outcome. Have remained well for three years.

The X-ray is useful for comparative studies and record of cases but does not always assist in prognosis.

Eighty per cent. of our chronic cases have improved generally and have been more free from pain than at any time during their involvement. About 10 per cent. of our chronics have recovered to practical normalcy, while the remaining have been without definite improvement.

All acute cases were free from pain and swelling, in from one to five treatments, fifty per cent. remained recovered, the remainder had recurrences in from four days to two weeks when more treatment was instituted. Of our acute cases thus treated, we have had no complications in those responding (without relapse) to first injections. Gonorrheal cases did not improve.

The administration of vaccine was considered the principal part of our treatment but all cases were given advantage of low carbohydrate intake and our later cases of low caloric feeling, following the advice of Pemberton, also where possible, hydrotherapy, handled in a proper manner, was employed without active aggressive massage, until acute symptoms disappeared when more energetic massage of exostosis, spurs and ankyloses was carried out. Administration of salines for regulation of the bowels and sodium salicylate for muscular soreness were also included in the routine treatment.

We have had no fatalities from treatment. Contraindications are mitral and aortic stenosis; structural change in the myocardium indicated by marked arrhythmia or any degree of dilatation; hypertension above 170 mm.; arterio sclerosis, advanced kidney lesion or alcoholism.

SUMMARY

1. Intravenous vaccine therapy does produce marked results in the recipient as evidenced by chill, fever, sweating and change in the blood picture.

2. We do not understand the blood change causing reaction, although it seems one of colloidal chemistry, involving surface tension of ions and cell irritability.

3. The average dose for inauguration of treatment is 20 to 50 millions of dead typhoid bacilli, depending upon age, size and robustness of the individual patient.

4. Diet should be regulated and assisting measures should be employed.

5. The case to be treated must be one of acute or chronic infective joint lesion.

6. In acute cases there is marked improvement and cure in 50 per cent. of cases after one to five injections given each third to fourth day

and in these cases there have been no complications.

7. In 50 per cent. of acute cases with recurrences, if foci of infection have been destroyed, more treatment will usually clear them up.

8. Ten per cent. of chronics are made practically normal; eighty per cent. are improved and ten per cent. remain unchanged.

CONCLUSION

Whether the use of foreign protein intravenously for the treatment of arthritis will be continued, will depend upon whether the violent reactions plus some danger to patient will be considered less than its benefits. We may find a simple protein that will be just as effective with less shock and we will be justified in its use; but until then let us give our patients the advantage of all the measures we possess so that they may be more comfortable while passing through such

an infective process and fewer of them will become a loss in a productive manner to their families and their communities.

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Death Following the Operation of Tonsillectomy with a Reference to Motor Driven Apparatus for Anesthesia*

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Editor's Note.—In recent years several investigations regarding the results of tonsil operations have shown not only that such procedures are dangerous and are associated entirely too frequently with serious complications, but also they are fatal in far too many instances. Dr. Clark's estimate of mortality rate is 1 to 2000. Other investigators have found one death in 800 operations. As all deaths are not reported the real death rate is even higher. Since the indications for tonsillectomy have multiplied and the age limit has been extended and virulent infection has become a complicating factor, it is not surprising that the operation has become more serious. Dr. Clark is to be congratulated on reporting in detail a series of 9 deaths after tonsillectomy. Whether bacterine therapy, previous to tonsil operations, will counteract post-operative complications remains to be seen. From the results of a questionnaire Dr. Clark offers a list of valuable suggestions, which if followed, would do much to lessen the morbidity and mortality of tonsil operations.

IT IS probable that few throat surgeons have more than two deaths following tonsillectomy during their life-times. For this reason this paper is based on the combined experience of several surgeons.

Data are presented which demonstrate that we are having a considerable mortality following tonsil ablation. Classifications and criticisms were purposely avoided and recommendations, the results of a questionnaire, are tentatively offered.

FACTORS IN INCREASED MORTALITY

In this paper, death at the time of tonsillectomy, or death within four weeks after the operation will be considered. This limitation of time is arbitrary but is warranted by a study of case histories following the tonsil operation.

Whether there has been an increase in the proportion of deaths following the operation would be difficult to establish, but the total number is considerable.

Mortality, within the terms suggested above, is probably about 1 to 2000. This percentage is not official in any sense but is based on certain studies and investigations made by the writer within the past five months. It is regrettable that reliable statistics are not available, but, as fatal cases today are largely unreported, we can see how difficult it is to arrive at any exact estimate.

In attempting to analyze the deaths at the time of or after tonsillectomy, we are dealing with a problem not only surgical but also medical in character.

The increased virulence of endemic organisms and the more uniform distribution of virulent infection in recent years are factors which we recognize as important although without our province as throat surgeons, to a large degree.

The natural recognition of the value of the operation has increased the number of operations, correspondingly adding to the total mortality.

The number of indications for the procedure has multiplied and the age limit when the operation is freely done has been extended.

The success of a number of operators, in

*Read before the Eye, Ear, Nose and Throat Section of the Ohio Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4-6, 1921.

ablating the tonsils of patients of advanced disease should also be noted.

Motor driven apparatus for anesthesia is another general factor which has been proposed as a source of certain deaths following the tonsil operation. It should be remembered that such apparatus for anesthesia is powerful and that both the surgeon and anesthetist may well take an interest in the volume of anesthetic delivered. The nasal tubes are reported to have delivered unvaporized ether in one instance, when the surgeon happened to note jets of fluid in the throat while proceeding with his work. When such tubes are used and whenever anesthesia is used, information concerning the presence or absence of infection in the nose and sinuses ought to be of value. The state of our knowledge at present is such that motor driven apparatus for anesthesia can neither be recommended nor condemned.

CASE REPORTS OF FATALITIES

The series of nine deaths which I am reporting today are all of residents of the Columbus district. No one surgeon has had more than one death in this list. Not one of these, so far as known, is reported in the literature. The scientific data is incomplete for obvious reasons, but the facts submitted are sufficient for our purpose. They are presented for your consideration and purposely with little comment:

CASE 1.—Patient, male, 44 years of age; had been comparatively free from tonsillitis until three or four years ago when he experienced three or four recurrent attacks. Not long after, an intermittent pain in the right hip and knee joint developed for which no relief was found nor any clear cut diagnosis established.

Two years ago he developed considerable pain about the heart with irregular pulse and a New York physician diagnosed a certain degree of cardiac dilatation. The heart condition under rest made some improvement but the joint condition persisted, and after a thorough medical examination in Portland, Maine, a tonsillectomy under nitrous oxide and ether anesthesia was performed.

On the fifth day after the operation, while at home, the patient complained of feeling very tired and went to bed with a high fever, which continued for a few days when he developed septicaemia, from which he died.

CASE 2.—A young woman had recurrent attacks of tonsillitis about every two weeks. The tonsils were large with wide-open crypts. The throat surgeon sent the girl home with instructions to have her family physician treat her until her condition should improve.

In a few weeks she insisted upon operation and came to the surgeon's office with the family physician.

Local anesthesia, 4 per cent. cocaine, was brushed over the tonsils with two drams of apothesis 1/5 per cent. infiltrated into the tonsils. The family physician had stated the patient occasionally experienced fainting spells. The operation went along without complications but immediately after the tonsils were removed the patient fainted, the pulse suddenly discontinued and she did not recover.

CASE 3.—Young man suffering from quinsy,

consulted a general practitioner, who made an incision to evacuate pus. Considerable bleeding followed, of a seeping character which could not be controlled. When referred to a laryngologist he decided that enucleation of the tonsil would enable him better to get at the points of hemorrhage. The patient died several days after of pneumonia.

CASE 4.—Patient, male, 45 years of age. Rather below normal in general condition. The operation was done in the office with local anesthesia, novocaine, one tablet to the ounce with adrenalin. The operation was uneventful at time with no special bleeding. The patient was sent home that evening, when oozing began and attending surgeon referred patient to the hospital where extensive edema of tissues of throat was noted. General anesthesia was then administered and within a few moments the patient became extremely cyanotic and died.

The attending surgeon considered extreme edema and possible asphyxiation by clot the probable cause of death. This man had had enucleation of the eye following an injury and it is said he had unusual amount of bleeding at this time.

CASE 5.—Male, ten years of age, was the third child operated in series with the same anesthesia. The child suddenly stopped breathing when well along in operation. The tonsils were large and cryptic. The child's nutrition was fair. Status lymphaticus was suggested by the pathologist.

CASE 6.—Patient, male, 20 years of age, referred to a laryngologist, for tonsillectomy preliminary to thyroidectomy by a general surgeon. The patient had been extremely nervous. The tonsils were large and boggy and had given moderate symptoms. Tonsillectomy was uneventful and immediate convalescence was satisfactory, but a small white patch remained in one fossa. The patient left for school, in another city. The second day after arriving there was seized with violent nausea and vomiting, rapidly becoming worse, and died in four days. The diagnosis of the attending physician was pneumonia.

CASE 7.—Child had extremely large tonsils from which pus exuded freely on pressure. The parents were warned that the situation had rather grave possibilities and the suggestion was made that one tonsil only be removed. The father insisted that both be removed. The child died within four days of the operation of pneumonia.

CASE 8.—A patient, male, 25 years of age, was referred for operation following several attacks of quinsy associated with joint involvement. The family physician stated that the general condition of the patient was good. The temperature the night before operation was normal. Within a few days of the operation the patient developed a high temperature. An atypical pneumonia was diagnosed. The patient expired two weeks after operation.

CASE 9.—Little girl, 10 years of age, referred by her family physician at 7:00 o'clock one evening for operation the next morning. The surgeon objected to proceeding with the operation until the appropriate medical examination had been made.

An average amount of hemorrhage occurred at the time of the operation, but oozing continued and the physician worked far into the night, when the child died. The mother, later said the child had been sick all summer.

THE NECESSITY FOR A MORE RIGID PRELIMINARY STUDY AND TREATMENT OF TONSIL CASES

By the study of septicaemia in its different forms, we have a possible opportunity to lower mortality following tonsillectomy. A more rigid and a more uniform preliminary study of all tonsil cases requires our concerted attention.

Such a routine demands that more frequently we shall give the internists the opportunity to study the exact status of the patient preliminary to operation and that internists report their physical findings, the pathologists give an accurate analysis of the urine and blood including erythrocyte, leukocyte and differential count as well as Wassermann reaction. The signed reports should be attached to our records. We all know fully what the difficulties are to establish such a routine, but if we wish to practice scientific medicine this necessity is difficult to escape.

Every throat surgeon is watching with interest the work done with bacterines preliminary to tonsillectomy as a possible preparation for the operation and many men are using bacteria expressed from the tonsillar crypts in the preparation of bacterines.

As long as the bacteriologists disagree concerning the utility of vaccines against streptococcus infection our progress in this direction is retarded but is not hopeless. The question of the preparation of the vaccines is not decided.

Richey states that the immunogenic qualities of vaccines are much depreciated by heating to 56° C.: Weaver claims that streptococci killed in Galactose solution and heated to 35° C. are most effective and that heating interferes with the antigenic properties of streptococci. The dosage is also under free discussion, but the range does not vary hopelessly.

This use of vaccine, preliminary to tonsillectomy may have a future in reducing septicaemia, which, in one form or another, is a common cause of death following tonsillectomy but the outlook is uncertain.

RESULTS OF A QUESTIONNAIRE

In dealing with the operation of tonsillectomy itself, I have written ten letters to well known laryngologists, asking the following two questions.

1. *What is your chief recommendation for possible reduction of mortality following the operation of tonsillectomy?*

2. *What is your second recommendation?*

Dr. Horace Newhart, Minneapolis, Minnesota:

1. Allow none but qualified laryngologist to do tonsillectomy, and insist upon every known precaution being taken, including thorough preliminary examination, blood tests, and in case of general anesthesia employ only an anaesthetist trained in throat surgery.

2. (a) Employment of the Rose position and suction apparatus for all cases done under gen-

eral anesthesia. (b) Ligation of all bleeding points not controlled at once by pressure.

Dr. Oliver A. Lothrop, Boston, Massachusetts:

1. (a) Teach the nurses how to recognize bleeding early. (b) Stop the bleeding arteries. (c) Do not allow inhalations of blood and tonsil secretions.

2. Do not operate when patient has any acute cold or infection thus limiting pneumonia and otitis media as a complication.

Dr. Fred J. Pratt, Minneapolis, Minnesota:

1. Lighter anesthesia. Use a suction pump to keep throat clean. Carefully watched and kept on side after operation until fully awake. No morphine before operation so patient will be able to clear throat as soon as possible after operation.

2. Better trained anesthetists. Blood clotting time test.

Dr. John M. Ingersoll, Cleveland, Ohio:

1. Hospital operation only. Particular care in the anesthetic both local and general. Thorough physical examination including blood coagulation test before operation.

2. Adequate preliminary operative training.

Dr. Thomas E. Carmody, Denver, Colorado:

1. Judging from study of cases would recommend education of the specialist before being allowed to operate.

2. Same as number one only more so and more careful physical examination.

Dr. Geo. Keiper, La Fayette, Indiana:

1. Always take coagulation time of blood.

2. Tie up every bleeding point with catgut.

Dr. Geo. W. Boot, Chicago, Illinois:

1. Concern Anesthesia. (a) Local anesthesia whenever possible. (b) Light anesthesia if general is used. (c) Rapid operation. Proper preparation of patient.

2. (a) Urinalysis. (b) Testing coagulation time. (c) Hospitalization of patient. (d) Cleansing of mouth. (e) Careful operation.

Dr. J. Leslie Davis, Philadelphia, Pa.:

1. (a) Tying blood vessels as routine to prevent hemorrhage. (b) Use of suction apparatus. (c) General anesthesia in all cases, administered by expert.

2. Hospital for all tonsillectomy patients.

SUGGESTIONS

Based for the most part on these answers and to a slight extent on other observations, I am presuming to submit a list of suggestions that may help in a slight degree to promote that uniformity of practice and standardization which seems necessary to progress in a work of refinement such as we pursue. Many of these suggestions should be addressed more to the family physician and to the laity than to ourselves. I take it, the facts presented are in many instances uniformly accepted so a part of our problems would seem to be to devise means whereby these purposes, if recognized, may, to a greater or less extent, be applied.

1. If a death occurs in connection with tonsillectomy it is a satisfaction to be able to produce careful records taken by a colleague and signed by him showing the condition of the patient previous to the operation. Such a record should include the blood analysis, the state of the blood pressure, the presence of leukemia or cholemia, the result of the Wassermann reaction, the presence of albumen or sugar in the urine, together with coagulation and bleeding time determinations.

Amassing such data may in time enable us to learn how to guard ourselves against the dangerous case. A flippant routine in this regard or none at all lends little hope of progress in a problem such as we are considering.

2. Every tonsillectomy should be performed in a hospital.

3. Admit the patient to the hospital the night before operation and record temperature. If temperature is above 99°, the patient should be further observed and studied before proceeding with operation.

4. A trained oto-laryngologist should do the tonsil operation.

5. A suction apparatus is considered highly desirable by many, if ether is used.

6. If local anesthesia is used, it has been suggested that the strongest solution be called for in making the dilution, as several reported deaths were due to mistaken dilution.

7. If ether is used, anesthesia should be brief as possible and warmed ether is often advised. Many consider it desirable to lower the patients head while operating.

8. Avoid traumatizing tonsil, as pus may be projected under pressure toward respiratory tract.

9. Avoid shreds or particles of tonsil.

10. Be certain teeth are firm, as dislodged teeth have caused trouble.

11. Manipulation of the tonsillar fossa has been condemned by a few surgeons. The aponeurosis of the superior constrictor and pillars should be guarded.

12. After operation the patient should be kept on his side and watched constantly by a nurse especially trained to be on the lookout for bleeding and if preliminary morphia is used the dosage should be small so that recovery of reflexes may take place quickly.

13. A considerable percentage of operators advise tying every bleeding point.

14. Patients should remain in the hospital for the night after the operation if children; and for two nights following the operation if adults.

15. Maintain supervision over the patient to a certain degree for one month after the operation.

16. Special precaution should be observed to prevent intercurrent infection from food and outside infection while lymph channels are exposed.

I wish to extend my thanks to the large number of persons who have helped me in compiling the data presented in this paper.

ADDITIONAL STATISTICAL DATA OF DEATHS FOLLOWING TONSILLECTOMY

The following additional statistical data may be of interest.

I have had printed for your attention the results of a brief but suggestive collateral investigation of deaths which have occurred following tonsillectomy.

From seven letters written to important insurance companies, the two following responses are worthy of consideration:

"The Company received death claims, in 1920, upon 3,944 lives, deaths from all causes. Four of this number died as the result of a tonsillectomy, with the following history:

Claim 1. Age at death, 23 years; died September, 1920; Tonsillectomy followed by pleurisy and general septicemia.

Claim 2. Age at death, 32 years; died February, 1920; tonsillectomy followed by bronchopneumonia.

Claim 3. Age at death, 45 years; died September, 1920; tonsillectomy followed by septic infection.

Claim 4. Age at death, 58 years; died November, 1920; tonsillectomy; died under operation.

THE NORTHWESTERN MUTUAL LIFE INSURANCE COMPANY."

Memo from Medical Department, The John Hancock Mutual Life Ins. Co.

"Out of a total of 25,927 deaths recorded in 1920, there were eight deaths classified as due to tonsillectomy.

Following are data of these deaths giving sex, age at death, terminal condition as reported by attending physician, and duration of life following operation.

Claim 1. Female 8 years old, respiratory failure under anesthesia.

Claim 2. Female 10 years old, status lymphaticus, same day.

Claim 3. Female 18 years old, probably died from blood entering trachea, hemorrhage, or possibly status lymphaticus, same day.

Claim 4. Female 20 years old, acute cardiac dilatation, one day.

Claim 5. Female 26 years old, pulmonary embolism, 30 minutes.

Claim 6. Female 56 years old, septicaemia, 19 days.

Claim 7. Male 4 years old, edema of lungs, 1 day.

Claim 8. Male 7 years old, hemophilia, same day.

The following report is from the Bureau of Vital Statistics of the State of Ohio. The following data were taken from death certificates for the year 1920, and were kindly submitted by Dr. U. G. Murrell of the Bureau.

This material did not seem appropriate for the body of the paper but I thought a few might find this information of interest.

OHIO STATISTICS

<i>Place of Death</i>	<i>Sex</i>	<i>Age</i>	<i>Cause of Death</i>	<i>Contributory</i>
Montgomery	Male	29	Pulmonary Gangrene.	Sepsis following Tonsillectomy.
Dayton	Male	54	Septicaemia with infected metastasis in joints and brain.	Infected Tonsils.
Akron	Male	8	Dilatation of heart.	Infected Tonsils.
Niles	Male	3	Haemophilia.	Tonsillectomy.
Dover	Male	7	Heart exhaustion following a tonsil operation.	Anaemia.
Lima	Male	17	Embolism of shock following operation, i.e., enucleation left eye and tonsillectomy; operation undertaken for Panophthalmitis.	Left and Chronic diseased tonsils.
Clermont	Male	12	Died under anesthetic operation for enlarged tonsils.	Operation.
Columbus	Female	11	Septic infection from tonsils.	
Stark	Male	45	Suppurative pneumonitis. Abscess of parotid gland and paratonsillar abscess.	
Columbus	Male	59	Quinzy (streptococcic) Septicaemia.	Streptococcic infection of tonsils.
Cincinnati	Female	49	Septic sore throat. Peritonsillar abscess incised.	Septicaemia.
Cleveland	Male	4	Secondary hemorrhage after operation for removal of tonsils and adenoids.	
Sandusky	Male	6	Ether narcosis. Operation for hypertrophy tonsils and adenoids.	
Cleveland	Male	7	Chloroform anesthesia.	Operation, Tonsillectomy and shock.

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Occupational Disease Law Now Effective

(Continued from page 604)

the attending physician will require, the name and address of the claimant; the date of first treatment by the physician; a description of the claimant's condition; including chief symptoms; the date when they appeared; history of previous illnesses due to occupation; description of complicating diseases such as alcoholism, syphilis, tuberculosis, etc; the description of treatment; the period of total disablement; the probable period of continued disablement, the names and addresses of consultants, and other pertinent facts.

On the completion of the manner of procedure and the decision on the exact forms to be used, such information together with forms, will be mailed to all practicing physicians in Ohio, together with a brief outline of the law, and directions to be followed.

As in the past, the State Medical Association will not only cooperate with the Industrial Com-

mission in disseminating this information, but will be at the service of the individual members of the Association in following up claims for medical service and otherwise aiding in speedy transaction of official state business.

In this connection, the members of the State Association should remember that these headquarters are always at their service not alone in securing information and replying to inquiries, but in following up claims and official business with various state departments.

CORRECTION

The name of Dr. Harry Mast Scott, Toledo, should have been included in the list, published in the August *Journal*, of graduates of Ohio State University, College of Medicine, who successfully passed the State Medical Board examinations and received certificates to practice in June.



NEWS NOTES OF OHIO

Chillicothe—Dr. Charles Miesse has returned home from an interesting European trip on which he served as the delegate for the local Rotary Club among 1,200 American Rotarians at a meeting in Edinburgh. Following the convention Dr. Miesse traveled extensively on the continent. He made the trip from London to Paris and return by airship.

Cincinnati—Dr. John C. Oliver has resigned as professor of surgery in the University of Cincinnati Medical College and head of the combined surgical services of the General Hospital. Dr. Oliver withdrew to devote more time to personal affairs.

London—Dr. W. F. Smeltzer, for 13 years a resident of this city, has disposed of his practice and property to Dr. W. E. Postle of Columbus and his son, Dr. F. D. Postle of Sedalia, who will take up the work October 1. Dr. Smeltzer plans to remain with the new firm until November, when he will seek a change of climate for the benefit of Mrs. Smeltzer's health.

Findlay—For the seventeenth time Dr. Don C. Hughes has been named state medical examiner for Ohio for the Woodmen of America.

Mt. Vernon—After a period of post-graduate study in Washington, Dr. J. D. Thomas, formerly a member of the staff of the Ohio Tuberculosis Sanatorium, has taken up his duties as chief of the tuberculosis section of the Seventh District of the War Risk Insurance Bureau, with headquarters in Cincinnati.

Fostoria—Dr. George L. Hoege, a practitioner of medicine for fifty years, has sold his property in this city and announced his intention to retire.

Tiltonville—Dr. Paul Morrison of this village has entered the United States Public Health Service with the rank of major and is stationed at the hospital at Colfax, Iowa.

Cincinnati—Dr. C. L. Bonifield and family spent the summer months at Bonipoint, Lake Simcoe, Uptergrove, Ontario, Canada.

Columbus—Dr. and Mrs. C. E. McClelland were members of the American Legion party which toured France in August.

Van Wert—Drs. B. L. Good and R. J. Morgan of this city were elected president and secretary-treasurer, respectively, of the Tri-County Medical Society, composed of Mercer, Van Wert and Paulding Counties, at the recent annual meeting in Celina.

Orrville—Dr. G. H. Irvin was slightly injured, August 3, when he drove his automobile into a telegraph pole in an effort to avoid collision with another machine.

State Association Will Again Make Post-Graduate Study Available to Members

Arrangements for the 1921 series of post-graduate lectures to be held in various parts of the state under the auspices of the Committee on Medical Education of the State Association, were announced by the committee in August. The announcement was immediately followed by a flood of gratified expressions from cities and towns included in the tentative itinerary and the counties covered, at the choice of subject and speakers for the meetings.

The plan this year is unique in that three speakers—Drs. J. H. J. Upham, Columbus; Ralph K. Updegraff, Cleveland, and Roger Morris, Cincinnati,—will cover the state, whereas in the past only one has been used. The committee felt that this innovation would lessen the sacrifice of time required of one speaker in delivering a series of lectures, and would also permit the holding of a greater number of meetings.

The subject for study in the 1921 series of lectures is "Routine Physical Diagnosis," and Drs. Upham, Updegraff and Morris are eminently well qualified to handle it. Dr. Upham is professor of medicine at Ohio State University School of Medicine; Dr. Morris holds a similar position at the University of Cincinnati Medical College; while Dr. Updegraff was for ten years connected with the faculty of Western Reserve Medical School and is at present staff consultant for a number of Cleveland hospitals. Dr. Upham is a former president of the State Association, and Dr. Updegraff councilor of the Fifth Councilor District.

Among the centers which will probably be visited by one of the three speakers are: Athens, Lancaster, Lima, Marietta, Mt. Vernon, Piqua, Uhrichsville, Xenia, Alliance, Bowling Green, Galion, Kent, Elyria, Painesville, Tiffin, and probably Hamilton and Portsmouth. In tentatively selecting these sites the committee endeavored to reach places that have not heretofore had the advantage of such assignments. The state is divided into three sections, north, south and central, and the three lecturers will be assigned according to their proximity to meeting places.

The incomplete schedule arranged in August, which may have to be revised slightly in some instances, includes meetings at Xenia, September 7; Piqua, September 8; Athens, September 13; Uhrichsville, September 22; Mt. Vernon, September 27; Lancaster, September 29; Painesville, September 12; Bowling Green, September 15; Alliance, October 4; Kent, October 6; Elyria, October 11; Galion, October 13; Tiffin, October 18.

Advance notices of the meetings, together with outlines of the lecture will be sent from the Columbus office to all members of the Association included in the district covered by each meeting. It is the hope of the committee that the series will receive the hearty support of the membership for organization as well as scientific reasons.

Interesting Sessions in Store for Health Commissioners Who Attend Annual State Conference

A preliminary announcement has been sent out in regard to the second annual conference of health commissioners with the State Department of Health in Columbus. The conference last year was so successful that it has been determined to increase its length this year, and it will last from September 12 to 16, inclusive. Headquarters will be the Neil House. Joint meetings will be held with the Mississippi Valley Conference on Tuberculosis, and with the Ohio Public Health Association, both of which meet in Columbus at the same time. The purpose of the health commissioner's conference is purely educational, and the program will be so arranged as to provide the maximum of instruction.

One of the sessions has been set aside for the discussion of milk and dairy supervision. At the first annual conference a committee was appointed to draft regulations suitable for general enforcement in all cities and counties. The purpose was to draft minimum regulations suitable for the least advanced district, upon which other more progressive districts could build to their needs. This committee will report at the September meeting. Mr. R. E. Tarbett of the United States Public Health Service will address the commissioners on milk supervision, and the assistance of the Dairy and Food Bureau of the State Department of Agriculture has been enlisted to tell the health officials of the work being done by that department to improve and extend dairy supervision in the state. A number of commissioners in general health districts have begun the supervision of dairies in their districts and these officials will report upon the progress of their work.

One session has been set aside for the discussion of public and private water supplies. Mr. W. H. Dittoe, in charge of the Division of Sanitary Engineering in the State Department of Health, will have charge of this session. There will be a practical demonstration of methods of collecting samples of water, procedure necessary to secure information about a water supply, and methods of examining samples. The situation as to water supplies and sewage disposal in each district in the state will be outlined by State Department of Health engineers, who will also inform the commissioners as to the program and policies of the State Department of Health in regard to water supplies, sewage and sewage disposal.

At another session the prevention of communicable diseases will be taken up. Each disease will be discussed by a member of the staff of the State Department of Health or a health commissioner. Public health nurses will take up the part played by nurses in the prevention of communicable diseases, and an effort will be made

to secure a uniform method of procedure and nursing practice.

The problem of clinics will occupy one or more sessions. The discussion will include orthopedic, tuberculosis, general and child clinics. Commissioners who have organized and held such clinics will be asked to report. A feature of special interest will be the "Business Man's" or Life Extension clinics for individuals of middle age who require periodic checking up by physicians to determine the onset of conditions which cause such a high mortality after middle life, especially among males.

Particular attention will also be paid to prenatal clinics and clinics for children under school age.

A feature of the conference which promises to be of interest will be a session devoted to official and non-official organizations, state and national, other than the State Department of Health, which carry on public health work. This will include among others the State Department of Agriculture, the State Welfare Department, the State University, the American Red Cross, the Ohio Public Health Association, the Ohio Institute of Public Efficiency, and the various bureaus and branches of these organizations. Members of the staff of each organization will be asked to present to health commissioners the particular phases of their work which touch on public health, so that the commissioners may be in a position to know what assistance they may be expected to receive from and give to each organization. The effort will be to coordinate the local work of these agencies insofar as it concerns the public health and to utilize the health commissioner as much as possible for the work.

Mrs. H. H. Snively and Mrs. F. G. Boudreau are planning to entertain the wives of health commissioners who attend the conference. An effort is being made to secure Dr. Haven Emerson for an address, and Dr. Richard Bolt of the National Child Council has also been invited to speak on child conservation. Surgeon John McMullen of the United States Public Health Service will deliver an illustrated lecture on trachoma at one of the evening sessions.

Three entertaining evening sessions are planned. Moving pictures, music and refreshments will be provided.

The 112th medical regiment, Ohio National Guard, the first unit of the kind ever assembled, spent the first two weeks of August in training at Camp Perry.

Mississippi Valley Conference September 12-14, Brings Prominent Anti-Tuberculosis Workers to Ohio

With a well rounded program and prospects for a record breaking attendance, Ohio is prepared for the ninth annual meeting of the Mississippi Valley Conference on Tuberculosis which takes place this year, September 12, 13 and 14 at Columbus.

The general program includes such well known speakers as Dr. Allen K. Krause, director of Dows Foundation for Tuberculosis Research of Johns Hopkins University and managing editor of the American Review of Tuberculosis; Dr. James A. Miller, New York, president of the National Tuberculosis Association, and Dr. Haven Emerson, Washington, D. C., medical adviser of the Bureau of War Risk Insurance.

The Sanatorium Section of the Conference which hold one meeting at the State Sanatorium at Mt. Vernon on Tuesday, September 13, will consider three main topics: Artificial Pneumothorax, Contact Tuberculosis and Diagnosis of Pulmonary Tuberculosis.

Three papers have been arranged on the subject of artificial pneumothorax as follows: "Type of Cases Suitable for Treatment, Dr. R. L. Williams, superintendent Wisconsin State Sanatorium; "Administration" (clinic), Dr. Ethan A. Gray, superintendent Chicago Fresh Air Hospital; "Results of Treatment," Dr. Herman H. Cole, Palmer Tuberculosis Sanatorium, Springfield, Illinois.

Dr. Stephen A. Douglass, Mansfield, former superintendent of the State Sanatorium at Mt. Vernon, and Dr. J. W. Toan, of the Michigan State Sanatorium, will handle the subject of "Contact Tuberculosis."

On the subject of diagnosis these papers have been scheduled: "Essential Findings in Adults," Dr. W. H. Waterson, Chicago, surgeon of the Bureau of War Risk Insurance; "Essential Findings in Children," Drs. Laird and Conroy of Nopeming Sanatorium, Nopeming, Minnesota; "Essential X-ray Findings," Dr. J. S. Pritchard, Battle Creek Sanatorium, Battle Creek, Michigan.

Dr. William Paul Brown, Cleveland is chairman of the Sanatorium Section and Dr. Eugene Pierce, Howell, Michigan, is secretary. Special arrangements have been made for the trip to Mt. Vernon from Columbus for the day and for a luncheon at noon at the Sanatorium.

Columbus affords splendid opportunity for the clinical demonstration which will be held at 3:30 Monday afternoon at the new dispensary of the Columbus Tuberculosis Society. Dr. H. Kenon Dunham, Cincinnati, will be in charge of this section, assisted by Dr. C. O. Probst of Columbus.

Headquarters for the conference will be at the Deshler Hotel and the three principal speak-

ers, Drs. Krause, Miller and Emerson will address the conference Monday evening in the ball room of the Deshler.

The second day of the conference will be devoted to sectional meetings, the clinical and pathological section meeting in Mt. Vernon while the nurses section and the sociological section will meet in Columbus.

The problem of handling the ex-service men who have been stricken with tuberculosis is to be given much consideration at the conference. Work of prevention, particularly among children, which is a focal point at the present time for the anti-tuberculosis movement, is to come in for much discussion. The Ohio Public Health Association which has been stressing this subject through pageants will present for the benefit of the conferees its pageant "Health Wins" at Memorial Hall on Tuesday night.

The business program of the conference is to be interspersed with many luncheons and social functions. These plans are in charge of the Columbus Society for the Prevention of Tuberculosis whose officials promise that the Ohio conference will be one long to be remembered.

Dr. William McNabb, St. Louis, is president of the Conference, Dr. Eugene B. Pierce of Howell, Michigan, is vice president, and Robert G. Paterson, executive secretary of the Ohio Public Health Association, is the secretary-treasurer.

On Monday, the opening day of the conference, there will also be held the annual meeting of the Ohio Public Health Association and a separate meeting of the Ohio Tuberculosis Hospital superintendents. Ohio Health Commissioners will also be in conference in Columbus during the same week and will have the benefit of the Mississippi Valley Conference. They have been called together for this conference by Dr. H. H. Snively, State Director of Health.

The Talley-Chatfield Law

One of the most important laws from a public health standpoint enacted by the present Ohio legislature and now effective, is the so-called Talley-Chatfield law which gives to the State Department of Health power to order improvements in public water supplies on its own initiative instead of acting only on complaint of local authorities or on petitions of voters. Moreover, it requires periodical analyses of municipal and public water supplies. The enactment was designed to provide safeguards against such serious water-borne epidemics as the Salem typhoid outbreak last fall, caused by conditions which the state department was then powerless to correct.

DEATHS IN OHIO

George H. Astler, M. D., Cincinnati College of Medicine and Surgery, 1890; aged 54; former member of The Ohio State Medical Association; died at his home in Elmwood Place, near Cincinnati, July 6, from heart disease. Dr. Astler had lived in Elmwood Place practically all his life. Surviving are his widow, Dr. Katherine A. Astler, and two sons, one of whom is Dr. Vernon W. Astler of Elmwood Place, and the other G. W. Astler, an interne at Grace Hospital, Detroit.

Edward W. Brown, M. D., Hahnemann Medical College, Philadelphia, 1879; aged 64; died at his home in New Vienna, July 28. Dr. Brown spent an active career of forty-one years in the general practice of medicine at New Vienna. He leaves his wife, two sons and one daughter.

William E. Crismore, M. D., Eclectic Medical College, Cincinnati, 1895; aged 49; died suddenly in his office in Fremont, July 16, from apoplexy. Dr. Crismore had practiced in Fremont for nine years. He had previously been located at Helena, where he was associated with his father, the late Dr. James Crismore; at Genoa and Toledo. His widow and two sisters survive.

Amos Emanuel Fried, M. D., Cleveland College of Physicians and Surgeons, 1913; aged 39; member of The Ohio State Medical Association and Fellow of The American Medical Association; died in his office in Cleveland, July 23, of heart disease. Dr. Fried was a native of Cleveland. During the recent war he served with the army transport service. He leaves one brother.

Cleon Andrew Giles, M. D., Ohio State University College of Homeopathic Medicine, 1915; aged 34; died at the home of his parents near Mineral City, August 2, after a year's illness with rheumatism. Dr. Giles had practiced at Leesville and Canton, closing his office in the latter city last fall because of ill health. His widow, one son and one daughter survive.

George Washington Hixson, M. D., Jefferson Medical College of Philadelphia, 1903; aged 49; former member of The Ohio State Medical Association; died at his home in Cambridge, August 8. Dr. Hixson was a member of the local Rotary Club and had recently taken an active part in the program of that organization in the interest of crippled children.

William E. Kiely, M. D., Medical College of Ohio, Cincinnati, 1877; aged 71; member of The Ohio State Medical Association; died at Good Samaritan Hospital, Cincinnati, July 13, from pneumonia.

Robert Benson McLaughlin, M. D., Starling Medical College, Columbus, 1903; aged 48; member of The Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Centerburg, July 9. Death

was due to apoplexy. Dr. McLaughlin practiced medicine in Centerburg for four years, removing to that city from Mt. Liberty in 1917. During the World War he held the rank of captain in the Medical Corps of the Army and was located at Fort Dodge, Iowa. Surviving are his widow, one son and one daughter.

William H. Metcalfe, M. D., Cincinnati College of Medicine and Surgery, 1890; aged 56; member of the Ohio State Medical Association; died at his home in Reno, near Marietta, July 29, of heart disease. Dr. Metcalfe located in Reno immediately after his graduation and continued practice there until four weeks before his death. His widow survives.

William H. Oviatt, M. D., University of Buffalo, Department of Medicine, 1869; aged 87; died in Lakewood, August 1, of injuries sustained when he was run down by an automobile. Dr. Oviatt, who still engaged in medical practice, was a veteran of the Civil War and was an Army surgeon for many years. He leaves his widow and one daughter.

Amelia J. Prior, M. D., Cincinnati College of Medicine and Surgery, 1890; aged 65; died in a Zanesville hospital, July 9.

Frank Hamilton Todd, M. D., Western Reserve University School of Medicine, 1876; aged 72; died at his home in Cleveland, July 16. Dr. Todd engaged in practice as a specialist in children's diseases from 1890 until a few weeks before the time of his death. He formerly served as assistant surgeon, marine hospital service at Fairport, Ohio. He leaves his wife and one son.

William H. Wood, M. D., Medical College of Ohio, Cincinnati, 1883; aged 73; died at the home of his daughter in Smithfield, July 2.

Franklin D. Sickles, licensed to practice in Ohio, 1896; aged 71; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Fredericktown, August 7, after an illness of two years. Dr. Sickles practiced in New York City for 21 years; Toledo for 22 years, and Fredericktown for seven years. At the age of 14 Dr. Sickles saw service as a water boy in the Battle of Gettysburg, in which engagement his father, and an uncle, General Dan Sickles, took part. His widow and two children survive.

Toledo War Risk Insurance

Dr. Calvin D. Todd is the medical officer in charge of the newly established Toledo branch of the War Risk Insurance Bureau. Under changes brought about by the Treasury Department in the organization bureau, the War Risk Insurance department is separate from the United Public Health Service.

Dr. H. W. Williams is examiner for the branch, and specialists associated with it are Dr. C. E. Fisher, surgeon; F. W. Pilliod, internist; L. R. Effler, eye, ear, nose and throat; B. G. Chollett, orthopedist; P. G. Tait, neuro-

psychiatrist; W. M. Shapiro, medical attendant, and R. P. Daniells, tuberculosis specialist.

The Toledo branch is in charge of the district including the eleven surrounding counties. It has established adequate offices with a competent clerical force in the Nasby Building, adjoining those of the Federal Board of Vocational Training and also the Toledo Chapter of the Red Cross, and if sufficient work warrants both the offices and personnel will be increased accordingly.

Dr. F. B. McNierney formerly examining physician for the combined War Risk and Public Health Service, will continue in that capacity for the latter, which includes medical care of sailors, postal workers, lighthouse keepers, members of the coast guard, civilian employes of the salvage depot and others.

The "Blue Hole" and Typhoid Fever at Castalia Subjects of Investigation

The famous "Blue Hole" at Castalia has been the subject of investigation by the State Department of Health because it is the outpouring of underground bodies of water which receive much contamination from the sewage of Bellevue and neighboring communities. Bellevue has no system of sewerage, the residents simply punching holes into the ground and piping down their wastes. The material is carried away by underground bodies of water which are reached by this means. As Bellevue has a public water supply, and as a considerable proportion of the residents have installed inside toilets, the amount of sewage disposed of in that way is considerable. Farmers in that section of the state secure water by drilling until one of these underground streams is reached. Sewage is disposed of in the same way. It is probable that many are using as a source of water supply the same stream into which their sewage is piped. The public water supply of Bellevue is secured by the impounding of surface waters which have no connection with the underground. Castalia has no public water supply but the residents use wells which have their sources in underground streams.

Dr. F. M. Houghtaling, commissioner of Erie County, recently directed the attention of officials of the State Board of Health to these facts and an investigation is being carried on. Farmers in that county have complained that after the recent rains well waters showed evidences of contamination, water-logged paper being discharged from a well in at least one instance. A quantity of uranin, a very strong dye, was placed in one of these underground streams at Bellevue and its presence was demonstrated in well waters some miles away.

At this writing the investigation was still under way and the results not yet complete. To add point to the investigation, six cases of typhoid have been reported at Castalia, and a

thorough epidemiological investigation was being made by Dr. F. G. Boudreau in collaboration with the health commissioner to determine the source of the disease.

The laws of the state dealing with pollution of streams do not include underground streams, and it has not been determined whether the State Department of Health has the authority to prevent the practices mentioned at Bellevue. The "Blue Hole" at Castalia is one of the places where the waters of these underground streams come to the surface. It has a depth of about forty-five feet, and is a clear blue from which characteristic its name is derived. The stream which is formed by the waters which well up in the "Blue Hole" is famous for trout. Officials of the State Department of Health are endeavoring to find some solution of the peculiar problem presented by the contamination of these underground waters, and steps will be taken to abate the condition as soon as the matter of jurisdiction has been defined.

Florida's New Practice Act

After several years of effort a new medical practice law has finally been secured in Florida, clearing away the obsolete multiple board arrangement which for many years has caused much confusion in medical licensure in that state. The new law establishes a composite board which has full authority to refuse or revoke licenses, to refuse recognition to low grade medical colleges and to protect the public against incompetent physicians. The personnel of those appointed on this board promises assurance that the provisions of the new law will be enforced. The people of Florida are to be congratulated on the successful passage of this law, and it is hoped that they will appreciate its importance and support its vigorous enforcement. The only flaw in the act is that osteopaths and chiropractors are exempted from the requirements of the medical practice act since, for the time being, their practice is regulated by separate boards. In time, however, when public opinion has been awakened to the injustice and unwisdom of providing an inferior standard of qualifications for any group of healers, these special boards may be abolished, as they were this year in New Jersey. Public opinion will not long uphold an evident injustice, once attention has been clearly called to it.—*Jour. A. M. A.*, July 30, 1921.

NEW NURSING COURSE

With the opening of the new college term, Western Reserve University, department of nursing, will offer a five-year course combining the curriculum required for a bachelor of science degree and for a registered nurse. This combination saves two years. The first two years will be devoted to regular college studies required for a bachelor of science degree, and the next two will be spent in Cleveland hospitals, while the fifth year will be elective.

Medical Work of Red Cross to Have Large Place in National Convention Program

Agencies therapeutic and preventative will have a prominent place on the program of the National Red Cross Convention, to be held in Columbus, October 4 to 8.

To this convention will come several thousand delegates and other thousands of visitors, interested in Red Cross Work, and particularly in the promotion of its Peace Time Program, which has so much to do with the health of the nation and the succoring of humanity, when disaster overtakes any community.

For the purpose of developing this program to the full a major portion of the resources of the state of Ohio represented in the State Fair Grounds and its buildings will be pressed into service, and the leading factors in the Red Cross work of the nation, including many of the highest officers of the federal government, will be requisitioned as program speakers.

As the crowning effort of the four-day program, there is to be a vivid exemplification in the shape of a pageant entitled "Historical Pageant of the Red Cross." This pageant demands the service of more than 3,500 participants, including a chorus of 1,000 voices and 2,500 men, women and children who will be recruited in part from the various centers of Red Cross work in the United States.

Incidental to the convention and participating in the pageant as factors will be groups of overseas veterans, nurses and war workers, including a delegation from the Walter Reed Hospital at Washington.

October 6 has been set aside for sectional conferences and reunion of hospital corp, nurses, canteen workers, and camp service workers. The speaking program of that day will hold probably the largest interest of any of the several for the medical profession.

Among speakers and topics scheduled for discussion on that day may be mentioned "The Red Cross in Disaster," by Robert S. Gast of Pueblo, who will detail the wonderful work done by Red Cross Units following the recent floods in Pueblo. "The Red Cross Public Health Nurse", is the topic assigned Miss Lillian Wald of New York, whose activity in this field has given her practically international reputation. "The Red Cross and the Nation's Health" is the topic assigned to Dr. William Evans. Dr. Evans is a southerner by birth, a graduate of the Agricultural College, and also of Tulane University of Louisiana. For four years he was demonstrator of pathology, and professor in the College of Medicine, University of Illinois. He was commissioner of health of Chicago 1907-1911, and has been professor of sanitary science at the Northwestern University since 1908. His message is therefore awaited with considerable interest.

On the same program will be Mrs. August Belmont, of New York City, who is one of the executive committee of American Red Cross.

Among other outstanding individuals who have been invited to participate as speakers, are President Harding, Herbert Hoover, Senator Frank B. Willis, Dr. Albert Ross Hill, French Ambassador Jusserand, General Sir Edward Allenby, Dr. Livingston Farrand (president of Cornell University), Miss Alice Fitzgerald, Dr. Thomas E. Green, Major General LeJeune, Henry Noble McCracken, (president Vassar College), Bishop William Fraser McDowell, assistant secretary of treasury, Eliot Wadsworth and Rabbi Jonah Wise.

The pageant which will be given two evenings of the convention in an auditorium capable of seating 10,000 persons, will visualize both historical antecedents of the Red Cross and the program of its present peace work. It is designed to force home into the public consciousness, the sense of its responsibility for post-war suffering. It is in this feature that the disabled soldiers, sailors and marines will take part.

The allegorical figure of the Red Cross sends to these needy ones groups of hospital workers, home service workers, deititians, etc.

The Health Service will be depicted by a scene in which carelessness and ignorance seize community (who is impersonated by a splendid looking woman), bind her, and drag her down to the stage, here she is immediately surrounded by Germs and Flies. The Knight of Public Health Service comes to the rescue.

In the succeeding scene in which disaster work depicting refugees from floods staggering about between flashes of lightning, upon the call of Community Red Cross answers with doctors, nurses, stretcher-bearers and other workers.

The work of the Junior Red Cross is introduced just preceding the grand ensemble which shows the Red Cross triumphant in the cooperation of all humanitarian efforts for the uplift and betterment of humanity.

The author of the pageant is Ruth Mougey Worrell, whose work in pageantry in recent years has attracted national attention. The Columbus presentation has been especially designed for the purpose for which it is produced, and has never previously been given.



HOSPITAL NOTES

The quarterly meeting of the Ohio Association of Tuberculosis Sanatorium Superintendents was held recently at Rocky Glen Sanatorium, McConnelville. Of the twelve or more institutions in the state, practically all were represented, and the meeting was one of the largest the organization has yet held.

—Plans for improvements at the Children's Hospital, Mt. Auburn, Cincinnati, contemplate the establishment of a school to be operated under the supervision of a public school teacher.

—A bequest of \$1,000 has been made to the city of Fostoria as the nucleus for a hospital fund, provided an additional \$20,000 is raised for the project within ten years.

—Alliance city council has authorized the local hospital commission to proceed with the erection of an addition to the city hospital. The sum of \$140,000 is at the disposal of the commission for the erection of this addition, which will make the hospital a 100-bed institution.

—The Graduate Nurses' Association of Cincinnati is inspecting properties with the idea of purchasing a dormitory.

—Having rejected the first lot of bids received for the erection of the new hospital building at the Knights of Pythias Home for the Aged, Springfield, as too high, the trustees requested new bids in August. One hundred thousand dollars is available for the erection, equipment and furnishing of the hospital.

—During the fiscal year ended July 1, 2,619 patients were enrolled and given treatment at the Massillon State Hospital, according to a report recently submitted by Dr. A. G. Hyde, superintendent. Admissions to the institution during the year totaled 609, while the recovery rate was approximately 31 per cent. Fifty per cent. of the patients enrolled were foreign born. The death rate was 6.5 per cent. The present enrollment is 1,916—1,034 men and 882 women.

—Application of Mercy Hospital, Columbus, for permission to borrow \$60,000 to be used for hospital improvements, has been approved by the Franklin County Common Pleas Court.

—A six-patient hospital for indigent children needing tonsil and adenoid operations has been established in the nurses' quarters of the Athens City hall. Local physicians are donating their services for the remedying of defects of this nature, discovered through school inspections but left uncorrected by parents because of lack of funds.

—The staff of Pool Hospital, Port Clinton, has been increased by the arrival of Dr. and Mrs. M. T. Donahue. The former is specializing in

bacteriological and pathological work at the hospital, while the latter has assumed the position of superintendent.

—Warren County physicians have heartily indorsed the project of establishing a county hospital. A former resident recently offered to erect a \$50,000 building in Lebanon for this purpose, on condition that the community or county equip it and agree to meet the annual deficit in operation.

—Contracts for the construction of a wing to Union Hospital, New Philadelphia, have been let by the board of trustees on a bid of \$36,384. The addition, of fireproof construction, will double the present capacity of 25 beds.

INDUSTRIAL COMMISSION ESTABLISHES CLEAR-CUT RULES GOVERNING HOSPITAL CONTRACTS

The Industrial Commission after conference with hospital representatives of the state, has completed a set of rules and regulations governing its contracts with hospitals for the care of workmen's compensation patients. While the new rules are not materially different from those which have been in force previously, they are more comprehensive and also more clearly defined, and are expected by the Commission to be the means of eliminating some grounds of dissatisfaction between the Commission and the hospitals in the past. A draft of the rules, which are retroactive to July 1st, follows:

1. (a) A hospital patient—an individual appearing on the record as an admitted patient but will not include patients applying for after care following discharge from a hospital or from the care of a physician.

(b) Unit Census Period—24 hours from midnight of one night to midnight of the next.

(c) Patient Day—Appearance on the census of treatment rendered entirely within a unit census period.

(d) Private Room—A room containing not more than one patient's bed.

(e) Semi-private Ward—A room containing more than one patient's bed, but not more than four beds.

(f) Ward—A room containing more than four patient's beds.

(g) Donated Service—Service of an individual rendering continuous service to a hospital for which no direct comparable monetary compensation is made.

(h) Donated Supplies—Commodities such as are currently consumed in a hospital's operation.

2. The basis of compensation of hospitals for the care and treatment of Industrial Commission cases shall be the average patient-day cost (per capita cost) of operating the contracting hospital during the previous calendar year, as determined by satisfactory data reported to the State of Ohio, Department of Health, under Section 1236-6 G. C.

3. The Industrial Commission will enter into formal contract with each hospital for each calendar year for the care of compensable cases

at a rate equal to the patient-day cost of operating each hospital.

4. The average patient-day cost shall be determined by dividing the total cost of operation by the total number of days hospital treatment given in the same period.

5. The total number days hospital treatment for any given period shall be the sum of the number of days treatment given each day of the period. The number of days treatment given each day shall be the patient census as of midnight of that day plus the number of patients who have been both admitted and discharged during the unit census period. Each birth shall be recorded as an admission on the day of birth. Deaths shall be recorded as discharge on the day of death.

6. The number of days treatment for which compensation may be claimed for a compensable case shall be equal to the number of times the patient appears upon the hospital census, provided that one day may be charged for patients both admitted and discharged within the twenty-four hour census period.

7. The total operating cost shall include all money disbursements legitimately chargeable to operation, and may include such sums for donated service and supplies as may be deemed proper.

8. Claim for addition to actual operating disbursements to make allowance for donated service will be recognized only when a detailed statement of service for which such claim is made is submitted in the annual report to the Department of Health.

9. A schedule of fees to be allowed for donated services shall be fixed annually for the calendar year by a committee representing the organizations donating the services, the Department of Health and the Industrial Commission. The Chief Medical Examiner of the Industrial Commission representing the Commission as Chairman, shall appoint the committee members representing organizations donating service.

10. The cost of all professional, scientific and ordinary services and supplies incident to the diagnosis, care and treatment of patients while in the hospital, except physicians and nurses' fees, shall be included in the operating cost, provided that such other service as may constitute a bona fide transaction between the patient and party other than the hospital shall not be included in the operating cost of the hospital. The evidence of such bona fide transaction shall be the non-appearance of any accounting for such services in the books of the hospital organization.

11. Any claim for compensation for professional, scientific or ordinary service rendered an industrial commission patient which does not appear in the hospital accounts as bona fide transaction between the hospital and the patient, shall not appear in the hospital statement as a claim for compensation. Such claim shall be made in a separate statement by the party rendering the service. This shall not be construed to include individuals referred to a hospital solely for X-ray or laboratory service.

12. A statement presented by any hospital to the Industrial Commission claiming compensation for services rendered shall specify:

(a) The total number of days treatment given.

(b) The number of days in private room, semi-private room, or in ward.

(c) If in semi-private room or ward, the number of beds in the ward.



For Prophylaxis against Diphtheria

DIPHThERIA TOXIN-ANTI-TOXIN MIXTURE (Diphtheria Prophylactic) is a mixture of Diphtheria Toxin and Antitoxin prepared according to directions laid down by Von Behring, Park and others.

Indications for use:

1. For general prophylaxis against diphtheria in schools and communities, excluding immediate contacts.

2. For permanent immunity against infection for individuals not recently exposed.

3. In conjunction with a prophylactic dose of diphtheria antitoxin for those who are exposed to diphtheria and desire a longer protection than would result from antitoxin alone.

Contra-indications: (1) It should never be used as a treatment for diphtheria. (2) It should never be used as an immunizing agent for an individual recently exposed, unless a prophylactic dose of diphtheria antitoxin is given at the same time.

Diphtheria Toxin-Antitoxin Mixture (Diphtheria Prophylactic) is given in three subcutaneous injections of one cubic centimeter each, at intervals of about five days. It is supplied in cases of three 1-cc bulbs, without injecting attachment.

Parke, Davis & Company

(d) The total amount due for services rendered.

(e) The amount received from any other source for services rendered the same patient during the same period.

(f) The source of any payment received by the hospital in addition to that allowed by the the Industrial Commission.

A statement shall be rendered for each case admitted. The character of service with respect to room or ward shall be that specified by the physician in charge of the case.

13. The contract between each hospital and the Industrial Commission will definitely state which of the following services are included in the operating cost of the hospital:

- (a) Room and board.
- (b) Emergency.
- (c) Staff nursing.
- (d) Operating room.
- (e) Anesthesia.
- (f) X-ray.
- (g) Limited or complete laboratory.

No additional claim above the patient-day cost for services contracted for will be allowed. When limited laboratory service is specified, the scope of the service shall be specified.

14. On petition from either party, disputed cases will be referred for decision to a committee appointed by the Chief Medical Examiner acting as chairman, said committee to represent in addition, the Ohio Hospital Association, non-members of the Ohio Hospital Association and the Department of Health. The committee will meet quarterly, and petitioners for hearing shall appear in person. Any petitioner not satisfied with the decision of the committee may appeal the case to the Industrial Commission.

15. Whenever a hospital shall neglect to furnish data necessary for computing cost per patient per day, in accordance with these rules and regulations or shall neglect or refuse to enter into a contract on the above basis with the Industrial Commission of Ohio, compensation shall be made such hospital on a flat rate of not to exceed \$3.00 per day, no extra charges being accepted.

New Law Permits County Tuberculosis Hospital

Several counties of Ohio are planning to build their own county hospitals for the care of tubercular patients, under provisions of the Jones law, effective August 15.

Under the old law two or more counties were required to join in the erection of district tuberculosis sanatoriums. Now, commissioners of any county having more than 50,000 population, may, with consent of the State Health Department, provide funds for purchase or lease of a site and erection of buildings for that purpose. The law also provides that any municipality maintaining such a hospital may continue it or lease or sell it to the county.

Mahoning County has planned to issue bonds for a new hospital to cost approximately \$175,000, and Trumbull, Stark, Columbiana and Bel-

mont Counties are contemplating erection of hospitals. Counties may still build joint district hospitals as before, if they choose.

Conference of Health Commissioners at Akron

A section conference of health commissioners of north-eastern Ohio was held at Akron on August 2. Dr. R. M. Schwartz of Salem presided and Dr. C. M. Peters of Stark County acted as secretary. The conference was entertained at the University Club by Dr. D. D. Shira, health commissioner of Akron. Eighteen commissioners were present, representing the counties and cities of north-eastern Ohio.

An address on infantile paralysis was given by Dr. F. G. Boudreau of the State Department of Health. Dr. Boudreau pointed to the increasing prevalence of reports from many sections of the state, and suggested that the commissioners should be on the lookout for undiagnosed cases. He stated that the past history of the disease suggested an increased prevalence this year, but anticipated an outbreak of even greater proportions in 1922. In the general discussion which followed all phases of the disease were considered.

Dr. Robert Lockhart, of Cuyahoga County, addressed the health commissioners on the Schick Test and the use of toxin-antitoxin. He cited his experience at Berea where an outbreak of diphtheria among school children was readily controlled by this means. Dr. Lockhart suggested that health commissioners should employ the Schick test as much as possible, advising that physicians be provided with toxin-antitoxin to immunize all children reacting positively.

Dr. Rockwood, health commissioner of Cleveland, spoke of new regulations adopted by his department prohibiting the sale of certain articles such as toy balloons, whistles, and face-masks, unless properly disinfected after being handled. He pointed out that such articles were frequently tested by buyers before being sold and might result in the spread of diseases in which the secretions of the mouth and nose contained the virus. The next meeting of this conference was postponed in view of the annual conference at Columbus the week of September 12.

South-Western Health Commissioners Meet in Cincinnati

A meeting of health commissioners of the south-western section of the state was held at Cincinnati on August 3. Dr. C. A. Neal of Hamilton County acted as chairman. The attendance numbered 21, including Dr. H. H. Snively, Director of Health, Dr. R. G. Paterson,

secretary of the Ohio Public Health Association, Colonel Page, dean of the Medical Department of Cincinnati University, Mr. Bleeker Marquette, secretary of the Cincinnati Public Health Federation, Mr. R. E. Tarbett of the United States Public Health Service and Dr. F. G. Boudreau of the State Department of Health. Director of Health Snively spoke of the State Department of Health and the assistance it was prepared to give to the health commissioners. Colonel Page outlined his plans in regard to the post-graduate instruction of alumni. His thought was that the education of physicians should not cease when they were awarded diplomas but that the school from which they graduated should continue to keep them informed of the progress of the medical sciences. Colonel Page laid before the conference some suggestions on post-graduate instruction in public health.

Dr. R. G. Paterson spoke of the campaign against tuberculosis, and the work of the Ohio Public Health Association. He mentioned the great need of tuberculosis clinics such as are planned by the State Department of Health and expressed the hope that the holding of these clinics would lead to the establishment of a larger number of district tuberculosis hospitals.

Mr. Bleeker Marquette spoke of the coming health exposition to be held under the auspices of the Cincinnati Public Health Federation in Cincinnati, and invited neighboring commissioners to participate. Dr. O. M. Craven, deputy health commissioner of Cincinnati, outlined the cooperation the city health department was prepared to give neighboring health commissioners.

A paper on the subject of dairy supervision was read by Dr. Jones, milk inspector of the Hamilton County Health Department. He described the local situation and outlined his program. A large number of herds have been tuberculin tested and the milk is being rapidly improved by inspection and examination. Mr. R. E. Tarbett outlined the needs of milk supervision in rural districts. A general discussion of the milk problem in cities and counties followed. The next meeting of the conference was postponed until after the annual conference at Columbus.

DR. MURRELL REAPPOINTED

State Health Director Snively has appointed Dr. U. G. Murrell, Wilmington, as registrar and chief of the division of vital statistics in the State Department of Health. This simply continues Dr. Murrell in the office he has held, the appointment being necessary under the reorganization code which transferred his department from the Secretary of State's office to the Department of Health.

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Industrial Claims Show Decrease and Departmental Efficiency of Commission Grows

Industrial depression which has been a reality since November, is reflected in the annual review of the claims department of the Ohio Industrial Commission for the year ended June 30, which was made public in August. It is the first time in several years that the number of claims for death awards and personal injuries showed a decline.

On July 1, when the commission was turned over to the new Department of Industrial Relations, there were only 1,437 claims for compensation awards pending. This also is a low record for many, many years. In former years a very much heavier file of pending claims awaited action.

The excellent shape in which the work of the commission was found at the end of the fiscal year is largely attributable to improved methods of handling claims, through which a great amount of unnecessary formal procedure is eliminated, and to extra work done by employees to perfect the departmental organization.

Since the enactment of the compensation law the commission has acted upon a total of 1,010,725 cases. A total of 156,077 claims were filed with the commission during the year ended June 30. They were divided as follows: State plan, 131,780; public employees, 1,061; self-insurers, 23,087, and 140 in which the employers had neglected to take out workmen's compensation. The total reported cases shows a decrease of 10,808 over the previous year.

In the year 148,954 cases were disposed of, and the commission passed upon a total of 200,873 cases. In some of them it has taken no final action for various reasons. The commission rejected 1,183 claims and made 848 death awards. A total of \$222,193 was paid in 1685 special medical cases where the case required more than the regular award of \$200 each. Out of the enormous number of cases heard only 54 appeals were taken to the courts.

According to the report of Dr. T. R. Fletcher, chief of the Medical Division, also submitted recently, the personnel of that division has grown from one physician and one stenographer, in 1913, to eight physicians, five stenographers and one medical clerk, in 1921, but even this increase in the administrative force has failed to keep pace with the increase in duties. Prior to the last four years, the division depended on local examiners in each county to aid in keeping in touch with injured claimants. This system was found to be unsatisfactory for many reasons, chief among which were the inadequate fees paid for the purpose and the examiners' occasional unwillingness to antagonize claimants by making absolutely unbiased reports. Special examinations by physicians from the commission's of-

fice have been made since the organization of the department, but until the last four years these have been more or less prefatory. The system of special examinations by men on salary, who do not have to depend on any certain clientele for their income, forms the backbone of the present system of medical supervision which has demonstrated its superiority over the previous one, according to the report.

Under this system the state is roughly blocked off in districts with several regular examination points in each district. Each examiner's trip is scheduled at the Columbus office, a synopsis made of the proof on file and the claimants notified when and where to appear for examination. The synopsis sheet contains such information in condensed forms as will give the special examiner the general history of the claim before the examination is made, thus aiding him to determine the merits of the case. This plan is not intended to interfere in any way with the treatment being administered by the physician of the claimant's choice, and is only for the purpose of reporting the condition of the claimant as shown by examination, and to secure an accurate check on all cases. It is the aim of the Medical Division to cover the state every four to six weeks, but this ideal has not been accomplished due to the limited force of examiners available. During the past year over 12,000 examinations, exclusive of special eye and local medical examinations, were made.

The report calls attention to the fact that the new medical and surgical fee schedule, which was formulated by the medical department with the assistance of a special committee of the Ohio State Medical Association a year ago, has not greatly increased the amount expended for medical services. The flat rate provision has served to prevent the inclination of some physicians to over-dress injuries, while on the other hand it is said to offer reasonable remuneration to those who are not so inclined. The report states that the flat rate provision has not proved a "cure-all" and that many difficulties are still encountered in the adjustment of fee bills, due largely to the fact that many claims involve several different injuries. On the whole, however, the plan has been successful and has enabled the commission to secure the services of well equipped physicians.

The rapid handling of cases and the high degree of cooperation between the State Medical Association and the Industrial Commission has been due to a large extent to the fairness and earnestness of Dr. Fletcher.

While there was an increase during the year in the number of claims in which the medical fee bills exceeded the usual allowance of \$200.00, the special provision for payment of fees in ex-

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cess of that amount did not result in as great an increase in disbursements for medical expenses as might have been expected. The percentage of these claims to all claims heard was about eight-tenths of one per cent., and the average amount paid in each claim in addition to the statutory amount of \$200.00 was \$131.86.

ACADEMIES AND COUNTY SOCIETIES

FIRST DISTRICT

Highland County Medical Society met in regular session at the Orpheum Theatre, Hillsboro, June 29. Dr. C. J. Broeman of Cincinnati gave an interesting lecture on "Radium, Its Indications and Therapeutic Principles," illustrated with 150 lantern slides.—H. H. Lowe, Secretary.

SECOND DISTRICT

Darke County Medical Society had an excellent meeting at the Henry St. Clair Memorial Hall, Greenville, August 11. There was a good attendance and the guests included members of the Mothers Club of the city. Drs. Robert Carothers of Cincinnati and A. G. Helmick of Columbus gave extemporaneous talks which were followed by spirited discussion. The former's subject was "Goitre, Present Day Methods of Treatment," and the latter's "Fundamentals in Infant Feeding."—B. F. Metcalfe, Correspondent.

THIRD DISTRICT

Logan County Medical Society postponed its monthly meeting from the first to the 13th of July, on which date it enjoyed the hospitality of Dr. and Mrs. J. C. Banning at their home in Belle Center. Twenty-five members were present to congratulate the host on his completion of fifty years in practice. There was no formal program. Dr. Banning gave an interesting talk on his earlier experiences and this was followed by tributes from Drs. Hamer, Harbert, Davis and Phillips, all of whom have known him for years. An excellent chicken dinner added to the enjoyment of the occasion.—M. L. Pratt, Secretary.

FOURTH DISTRICT

Sandusky County Medical Society's July meeting was held at Reynolds Grove, Greensprings, on the 27th. After routine business matters were cared for the scientific program was taken up which consisted of a splendid address by Dr. O. H. Thomas, Fremont, on "Public Health Problems." The essayist, who had his topic well in hand, explained the divisions of the state health organization down to the county commissioners and nurses and outlined their duties. The spread and prevention of contagious diseases were topics thoroughly covered.—C. I. Kuntz, Secretary.

FIFTH DISTRICT

Lorain County Medical Society held a special meeting at the Elyria Country Club on the afternoon and evening of August 10. The meeting was planned in compliment to Dr. and Mrs. G. D. Nicholas, Jr., who gave a pleasing account of their recent European trip on account of the Rotarian convention at Edinburgh. Dinner was served at six o'clock and there was an interesting program of entertainment. Among guests at the meeting were Dr. R. K. Updegraff of Cleveland, councilor of the Fifth District, and Mrs. Updegraff; Mrs. Maynard, widow of the late Dr. O. T. Maynard; a number of dentists and their wives, and Superintendent Fall of Elyria Memorial Hospital.—W. E. Hart, Secretary.

SIXTH DISTRICT

Summit County Medical Society held a luncheon meeting at the Elks Club, Akron, July 13, with 63 physicians present. Dr. Bernard Frantus, associate professor of Therapeutics, University of Chicago, was the guest of the occasion and gave a novel and much enjoyed address on "Alcohol." Following the meeting, the members were guests of the management of Summit Beach Park for a swim and boat ride.—A. S. McCormick.

SEVENTH DISTRICT

Belmont County Medical Society spent the afternoon and evening of August 4 at Bethesda Park, Bellaire. There was a six o'clock dinner and in the evening an interesting and instructive health program which was open to the public. Mrs. Lillian Burt, of the State Health Department spoke on "Public Health Work," with special reference to tuberculosis in rural districts. Motion pictures on health subjects were also shown.—News Clipping.

EIGHTH DISTRICT

Muskingum County Medical Society, in regular session at Zanesville, August 3, heard a paper by W. I. Jones, D.D. S., Columbus, on "Breath Holding As a Test for Anesthesia," illustrated with lantern slides.—M. A. Loebell, Secretary.

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BATTLE CREEK SANITARIUM

Elaborate Cincinnati Health Exposition to Point "Road to Health" to Many Thousands of Visitors

Second only in size to the Pageant of Progress exposition at Chicago last month, the Cincinnati Health Exposition, to be held in Music Hall October 15 to 22, is considered of far greater importance because of the vital interest of its subject and purpose. Colonel Peter E. Traub, commandant of the military post at Fort Thomas, Kentucky, is chairman of the executive committee in charge of the exposition. In a recent address before the Cincinnati Business Men's Club Colonel Traub said:

"The physical condition of the average civilian now is just as poor as it was during the World War when only one man in four was able to pick up a gun and go off to fight."

Colonel Traub's statement startled his hearers, who believed that the lesson taught by the draft examination had been heeded, and that the nation today was in better physical shape than before.

"This does not apply to ex-service men," Colonel Traub continued. "They are in better trim than they were. The Army taught them the importance of proper physical exercise in the development of the youth of the country."

"But in examining prospective soldiers of the present we find the same appalling lack of development that confronted us during the war. The civilian is leading his same old, easy-going existence, taking little or no exercise; working to get money, deaf and blind to the fact that the greatest thing in all this world is just health, strength and happiness!"

Several hundred thousand persons are expected to attend the Health Exposition. A limited quantity of commercial space is being sold, to defray expenses of the venture, but it is specified that these exhibits must have a definite relation to health.

The importance of the Exposition is demonstrated by the fact that the exhibit shown by the United States Public Health Service at the Chicago pageant, will be exhibited at the Cincinnati exhibition. Included in the display will be sixteen microscopes, each magnifying 1,000 times. Dr. Charles Bolduan, Chief of the Section of Public Health Education, has arranged to send the exhibit to Cincinnati, and his assistant, Crittenden Marriott, famous Kentucky novelist, probably will be in personal charge.

Among the many novel mediums that will be used to reach the public, motion pictures will be utilized to an extent unknown before in "putting over" the health sermon that physicians and others interested in the enterprise are trying to convey. More than a score of the one hundred national, state and city organizations and institutions participating in the educational exhibits will use the movies to visualize the "road to health." In some instances, owing to the fact

that space is limited, the screens will be no larger than big books, but although the figures will be small they will be distinct. Dr. C. A. Neal of Norwood, district health commissioner of Hamilton County, is chairman of the Special Features Committee which will have charge of the film programs.

The Cincinnati Academy of Medicine is taking an active part in preparations for the Exposition, and physicians are serving at the head of a number of important committees. Dr. Carey P. McCord, professor of preventive medicine at the University of Cincinnati College of Medicine, is chairman of the Educational Exhibits Committee, and associated with him on this committee are Drs. Samuel Iglauer and Oscar Craven. Dr. A. C. Bachmeyer, superintendent of Cincinnati General Hospital is chairman of the Commercial Exhibits Committee, and Drs. E. O. Smith, William H. Peters, health commissioner of Cincinnati, and Dr. Sidney Rauh, are among other members. Physicians serving on various other committees are Dr. Julien E. Benjamin, vice chairman of the executive committee; Colonel Henry Page, Dean of the College of Medicine, University of Cincinnati, executive committeeman; Dr. Kennon Dunham, chairman, Academy of Medicine committee; Drs. G. F. McKim, Martin Fischer, Mark A. Brown, M. T. McCarthy, Dudley Palmer, Nora Crotty, Albert Bell, Frank Lamb, Ralph Carothers, Elizabeth Campbell, members of same committee; Drs. Otto P. Geier and J. V. Greenebaum, program committee; Dr. Frank W. Mossmeier, Junior Chamber of Commerce committee; Dr. R. B. Cofield, chairman, Rotary Club committee.

Sixth District Meeting

The Union District Medical Society of the Sixth Councilor District held its 190th session at Millersburg, August 9. The meeting was well attended, enthusiastic and successful from every point. Among those who took part in the excellent program were Dr. Wells Teachnor of Columbus, president of the State Association, who spoke on "Some Things the Doctor Can Do for Humanity, Aside from Mere Routine Work," and Dr. D. W. Stevenson of Akron, councilor of the Sixth District, whose topic was "Our District in Excelsis."

Others speakers and the subjects of their essays were: "Some Remarks about Therapy," Dr. I. S. Putnam, Millersburg; "Amputations and Their After-Care," illustrated with lantern slides, Dr. H. R. Conn, Akron; "Diarrhoeal Diseases of Infants," Dr. Fred King, Canton; "Syphilis of the Urinary Tract," a preliminary study, Dr. J. F. Elder, Youngstown; "Bones and Joints," illustrated with lantern slides, Dr. Walter G. Stern, Cleveland.

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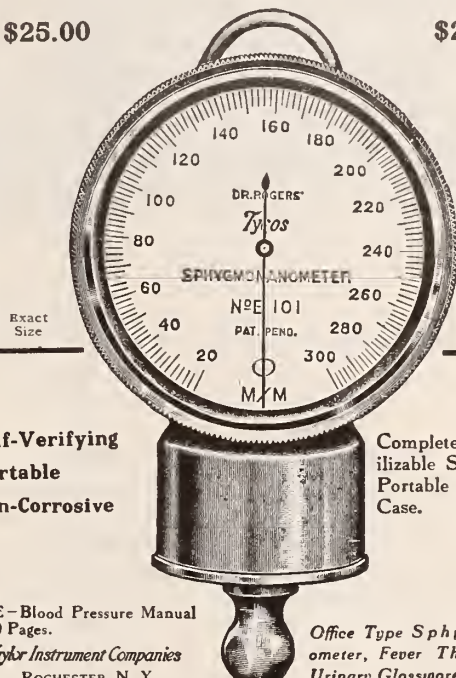
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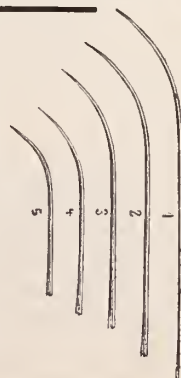
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Medical Chautauqua, Dayton, Sept. 19-23

The annual Chautauqua of the Second District Medical Society, which has become a post-graduate feature much anticipated by the profession of not only that district but the entire state, will be held at Dayton, September 19 to 23, inclusive. The program had not been completed in August but assurance was given that its excellency would equal that of previous years when the Second District has had extremely successful meetings.

The partial list of speakers who have definitely accepted places on the program includes Dr. John T. Geraghty, Baltimore; Dr. C. J. Whalen, Chicago; Drs. George W. Crile and John Phillips, Cleveland; Dr. J. F. Rooney, Albany, New York; and Dr. Kenneth D. Blackfan, Cincinnati. It is probable that Dr. George Dock, St. Louis, and

Dr. John Deaver, Philadelphia, will also be among the lecturers.

While this course of lectures, which has supplanted the regular annual meeting of the Second District Society for the last few years, is arranged for the benefit of physicians of that district, the committee in charge of arrangements hopes that many outside the district will avail themselves of the opportunity to hear these able men, with but little cost and a minimum annoyance of travel. The fee for the entire course, including the annual banquet, is \$10.00.

Dr. A. L. Light, Dayton, is president of the society; Dr. E. R. Arn, Dayton, secretary; Dr. H. C. Haning, Dayton, treasurer, and Dr. Harry D. Martin, Springfield, chairman of the Program Committee. Further details concerning the course may be obtained by writing Dr. Arn, the secretary, Fidelity Medical Building, Dayton.

State Medical Board News

At the regular meeting of the Board, July 4, certificate of James A. Campbell, M. D., Columbus, was suspended for three months for the reason that Dr. Campbell had indulged in grossly extravagant advertising and the use of words in his advertisement prohibited by statute. Dr. Campbell's advertisements were used in connection with a "Chiropractic Health Institute" to be operated by him in Columbus.

—Dr. Charles W. Milliken, Akron, who recently plead guilty in the Common Pleas Court of Summit County to the performance of criminal abortion, appeared before the Board and asked that the revocation of his certificate be modified to a suspension. His plea was unavailing. The Board by a unanimous vote revoked his certificate.

—One physician who appeared before the Board to explain the use of alcoholic liquors admitted that prior to February 18 he had so indulged but he submitted indorsements showing that his conduct subsequent to that time had been proper. He was reprimanded and advised that the case would be continued generally and his conduct observed.

—The certificate of Dr. Lee B. Warren formerly at Lorain, was restored after August 1. Dr. Warren appeared before the Board with testimonials from prominent physicians to the effect that his conduct had been satisfactory since January 6.

—Four physicians appeared before the Board to explain irregularities attributed to them in the submission of bills for services to the Industrial Commission. Three were reprimanded and notice was given to them that any further irregularities would warrant drastic action. One case was continued for a further investigation to be held at the October meeting. It should be stated in this connection that the submission of

a false bill to a State Department is an offense which upon conviction would subject the offender to a penitentiary sentence.

—Martha Saylor, Tiffin, was arrested July 30 by an inspector of the State Medical Board charged with the illegal practice of medicine. Three counts were filed against her.

—Jacob Michaels, healer extraordinary of Forest, Hardin County, was arrested on July 29 by Inspector Ludeman for the illegal practice of medicine. Two counts were filed against him before Mayor Stevenson of Kenton. The case will be heard August 20.

—E. N. Gregory, Columbus, was arrested August 2, charged with the illegal practice of medicine. Case set for hearing September 8.

—J. Wilson (colored), famous Indian Root and Herb Doctor, was arrested August 2 charged with announcing or advertising himself as a practitioner of medicine before he had obtained a certificate. Wilson plead guilty before Municipal Judge Berry of Columbus, on April 6. He was fined \$100 and costs, suspended providing he left Ohio within 48 hours.

—R. McElrath, Columbus, plead guilty in Municipal Court to the illegal practice of medicine. He was fined \$100 and costs and given four days to arrange his affairs and leave Ohio.

—W. G. Hamlin of Wood County was arrested August 1 by Inspector Ludeman charged with illegal practice of medicine. Hamlin is a physician who is not registered in Ohio. Case will be heard by Justice Nearing of Bowling Green.

—Mary Tutak, an unlicensed midwife, plead guilty to the illegal practice of midwifery before Justice of the Peace Samuel Doren, Rossford, Wood County. He was fined \$25 and costs on August 4.

—Eli Wonderly, magnetic healer of Defiance, was arrested on complaint of Inspector Ludeman on August 5. Case will be heard by Geo. W. Kelly, Justice of the Peace.



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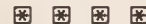


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THE HEALTH ACTIVITIES OF OHIO COUNTY EXTOLLED IN NATIONAL PUBLICATION

While casting about for happenings of unusual interest elsewhere it is sometimes borne in upon us that we are apt to overlook or underestimate the efforts of our own communities which others find worthy of praise and emulation. This happened recently when in checking over exchange publications it was found that *The Red Cross Bulletin*, issued at Washington, had made the progressive health program of one of Ohio's rural counties the subject of an enthusiastic, illustrated story. In compliment to Lake County, and for the benefit of other communities, the article is reproduced:

"That regard be had for public welfare is the highest law." At the right of the entrance to the Lake County, Ohio, court house this civic ideal is inscribed. A Red Cross observer's visit to the county revealed some of the way in which the ideal is expressed in county activities.

After the war, the money in a large war-chest fund was apportioned among organizations. The American Legion used its share for a club house. The Red Cross, through its board of directors, accepted \$7,500, an amount that, according to their estimate, would finance the Red Cross program for three years. The leaders felt that the work should win its own support by that time.

A house, purchased and equipped for an emergency hospital with war-chest money, was given to the local Chapter to use as long as it would, with the understanding that it is county property and will be claimed by the county when the Red Cross ceases to use it. With these spurs to activity the Red Cross started to make its peace work as worthy of pride as its war work. How well they are doing it can be judged from the fact that this fund is not exhausted, although the Chapter has enlarged its program and this year has a budget of about \$5,000.

There is in this Chapter no headquarters town. Painesville is only one of the eleven branches. A board of directors has a representative—all but one of whom are men—from each branch. Meetings of this board are called for decision on larger issues about twice a year, but, when scheduled, the directors come even if "they have to leave their plows." Other Chapter matters are handled by telephone calls to directors, or by the smaller executive committee of seven chosen by the directors. The Chapter has other committees on Home Service, Nursing, Junior, First Aid, Development and Production. Each branch has at least a chairman and secretary and has other officers and committees as it chooses.

The Red Cross program includes service to service men and home service in other families, for which a worker—the executive secretary—is provided. Health is written large in the program. The first Red Cross nurse so won the con-

fidence of the people in her public health work that she was chosen health officer in Painesville—a position which she still reluctantly holds, at the same time supervising two other Red Cross and two county nurses, each of whom is assigned to a separate part of the county. The financing of these nurses is an illustration of the good spirit in Chapter affairs. Wickliffe, a wealthy residence community, finances its own nurse and the Health Center shown in the picture. In Fairport, with a large industrial population, the much-needed nurse whom the town was not ready to support is being financed by the Chapter.

Child welfare clinics are held regularly now in six branches, with assistance to some of them from other local organizations in providing equipment, etc. The reserve equipment stored in the Red Cross house is proving its usefulness in these branch clinics. Cots, linen, granite wash basins and the like are ready for use. This Red Cross house furnishes a place, also, for the Home Service office, for the production of garments for European children which has started in Painesville as it has in other branches, for a regular clinic in which the Child Conservation League and the Parent-Teachers' Association are interested, for baths for some of the school children and for further developments which are planned.

There is a second unique house in Lake county, which stands for health and regard for public welfare. The nurses had a baby tent at the County Fair in 1919. The tent was inadequate, partly because it was not proof against rain. The supervising nurse began her campaign for a house for babies as good as those for calves and for pigs. The Fair commissioners saw the point. She urged that families, especially the women, who would otherwise have to stay at home, could come to the Fair if there were a safe and comfortable place for the babies. A house just off the fair grounds was secured. Running water and electricity were provided. The county commissioners last winter added a furnace, so that the house could be used for an additional emergency hospital if another "flu" epidemic demanded it.

The Baby House is now an established feature of the Fair. It is through the weighing of babies and through the advice to mothers, temporarily an educational institution.

In every way possible this supervising nurse and her corps of assistants are calling people's attention to health. They work in cooperation with the county health commissioner. They work in the schools. Ninety-seven girls graduated from classes in Home Hygiene and Care of the Sick in Painesville last year. Thirty-five of



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them are taking the class in Personal Hygiene this year. The supervising nurse has talked to the girls in Lake Erie College and taken them with her on county trips. She has given instruction to Girl Scouts. She is leader of the Girls' Community Club—all in addition to being city health officer.

Plans for Rehabilitation of Cripples

The new State Board of Vocational Education, created by the reorganization code, held its first meeting in Columbus recently for the purpose of discussing plans for vocational education and adopting a program of industrial rehabilitation. Members of the board are five members of the governor's cabinet—Education Director Riegel, chairman; Agricultural Director Tabor; Finance Director Waite; Commerce Director Phipps and Director of Industrial Relations Tetlow.

Mr. W. F. Shaw, who has succeeded Mr. Charles F. Brady as state supervisor of industrial rehabilitation, met with the board and laid before it a program for Ohio modeled after the plan suggested by the federal government, which is cooperating with the states in this work. There is available for the re-education of cripples in Ohio \$109,000, one-half of which is contributed by the state and the other half by the national government.

The budget presented by Mr. Shaw provides for the expenditure of \$7,500 in Columbus; \$12,000 in Cincinnati; \$12,000 in Cleveland; \$7,500 in Dayton, Elyria, Toledo and other large centers. The sum of \$21,000 is reserved for unorganized centers where there are no social service agencies for carrying on the work. The program provides for utilizing existing institutions such as the Red Cross and similar agencies wherever possible.

One of the definite steps which the board is said to be seriously considering is the establishment in Columbus of a school for the instruction of crippled girls who cannot attend public school. The state supervisor of industrial rehabilitation has experienced little difficulty in finding positions where crippled men and boys may learn some trade at which they may earn a living, but it is believed a training school which would be a combination of workshop and store where handwork might be sold, would solve the situation for girls. Cleveland already has such an institution and the board hopes that the idea will ultimately be adopted by other cities throughout the state.

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new serum or anti-toxin. It must function trustworthily—not merely for a time, but during its whole, long, useful life.

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Victor Service also includes the publication of a periodical called "Service Suggestions" in which X-ray progress is recorded. Although published primarily for the benefit of Victor clients it will be sent to physicians who wish to learn of the advances that are made from time to time in radiography. There is no charge for "Service Suggestions."

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Expansion Program and New Faculty Appointments Announced at O. S. U.

Erection of a 300-bed hospital and a new medical science building and the transference of the Medical College of Ohio State University to the university campus are events scheduled to take place ere long. Work on the hospital and medical science building will begin soon after September 1. Their erection, long contemplated, is part of the expansion program of the medical college, made possible by the passage of the Fout's bill by the last legislature carrying a one-eighth mill levy for building purposes at state institutions including the university.

Other developments at the university include the announcement by the board of trustees in August of several new appointments to the faculty of the medical college. Among these, Dr. Charles S. Hamilton of Columbus is named professor of surgery and head of the department of surgery. Dr. Hamilton is chief of the surgical staff of Mt. Carmel Hospital and well-known throughout the state and country. Dr. John Dudley Dunham of Columbus, who has also had extensive experience as an instructor, is made assistant professor of medicine.

Dr. R. G. Hoskins is the newly appointed professor of physiology. Dr. Hoskins many years ago was connected with the faculty of the Ohio Medical University, later as professor of physiology at Northwestern University Medical School. Recently, he has been associated with Dr. Lewellys Barker of Johns Hopkins in writing and editing a series of four volumes on the "Internal Secretions," to be published in the fall. Dr. Hoskins is also editor of the scientific magazine known as "Endocrinology," and the editorial offices of this publication will be transferred to the College of Medicine, Ohio State University. Dr. Hoskins is a Doctor of Philosophy from Harvard University and has the degree of Doctor of Medicine from Johns Hopkins University. He is regarded as one of the foremost physiologists of the country.

Dr. Clayton S. Smith, recently of Northwestern University Medical School has been appointed professor of physiological chemistry and pharmacology. Dr. Smith has the degree of Doctor of Philosophy from Columbia University and the degree of Doctor of Medicine from Northwestern Medical College. For a great many years he has been in teaching work and has been associated to a large degree with the chemical and pharmaceutical work carried on by the Bureau of Chemistry of the United States government.

MILITARY REUNION

The second annual reunion of the 89th Division Medical Officers will be held in Kansas City, Missouri, October 28, according to an announcement made by Dr. Czar C. Johnson, secretary of the 89th Division Medical Association.

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MEDICAL COMMENT ABSTRACTS AND CURRENT TOPICS OF INTEREST

The General Practitioner

NOTHING is more interesting to those of a philosophical frame of mind than to sit still in an easy chair and watch the pendulum of medical thought swing from extreme to extreme until it finally reaches an equilibrium. The gunshot prescription was followed by a period of therapeutic nihilism, and this in turn ended in a burst of glory for Ehrlich's great sterilizing therapy, and today men are still trying to combat by chemical means diseases which were not very long ago considered unreachable.

The days of general practice were followed by the wave of specialism,—a specialism that was without bounds and knew no reason. In one big clinic in this country there was a department for diseases of the organs above the diaphragm and, when a patient with myocardial insufficiency developed an enlarged liver, a colleague from the department downstairs had to be called in consultation. Fortunately, this intense phase of specialism was short lived because of its own limitations. Yet today it is far from dead. Diagnostic clinics composed of a group of individuals, each working on a different part of the patient's anatomy, are becoming more and more common and are replacing the skilled individual practitioner.

It is fair to ask the question: Can such diagnostic clinics ever replace the man who, trained in the school of experience, learns to find, place, and evaluate the symptoms and signs in his patient? Superficially, it would seem that the tremendous ramifications of modern medicine in the fields of correlated science, into industrial hygiene, and sociology would make extreme specialization necessary. But, after all, there is no use in a lot of data brought together by a group of men unless there is some one individual able to sum up information accumulated by the group. Successful practice is never possible unless the patient is considered as a whole with a mind as a bundle of associated organs. Therefore, the head of the diagnostic clinic has to possess certain qualities which, it seems to us, are very closely related if not identical with those developed by the first class general practitioner in the course of his own practice.

Reviewing for a moment the training of the different types of men in medicine, it can easily be seen that the hospital bred man looks at disease as an accomplished fact; by means of careful clinical observation in the wards, controlled by the most exact laboratory methods, he is able to have a perfect grasp of the proved product; but, as Sir James Mackenzie has often said in recent writings, he has not learned to study disease in the incipient stages and he misses the

mental training involved in following the course of illness from its very outset. Furthermore, he is at least liable to the great fault of dispensing with his senses and relying upon technical methods of procedure for information which he could obtain unaided. Important and valuable for the scientific study of disease, especially for the advance of rational thought in medicine as opposed to empiric progress, the technical and laboratory developments have lagged behind the clinic in actual practical help to the physician. For instance, the electrocardiograph cannot be interpreted by anyone who is not specially trained in heart disease and, except in very rare cases, adds nothing to this man's knowledge of his patient's condition. Blood chemistry, which has occupied the field for many years, is in the same position. In the study of diseases of the kidney, for instance, it has not given much of practical benefit which the physician must know to help his patient; in fact, as a recent author commented, the hospital physician is apt to rush into detail at the expense of the whole.

Contrast with this the man who is either unable or unwilling to take the time necessary to pursue the more intensive type of investigation just discussed. Is he any less capable? Is his field any less broad because of this? Of course, the answer depends on the type of the particular individual under discussion rather than the type of work. A man in the country or city who is forced to develop his senses, who must rely on information obtained purely by personal study, must, if he is to develop at all, pretty soon show those traits which Mackenzie believes will guard the future of medical practice. It is he, rather than the hospital physician, who sees disease before the picture is painted in all its colors. It is he who must watch the daub take form, when at first everything seems blurred. Without the facilities for determining non-protein nitrogen, he is able to differentiate kidney lesions; without an expert ophthalmologist, he has to know enough of the ophthalmoscope, to interpret an eye ground. Indeed, there are a large number of men doing general work who not only have the burden of individual therapy but must also carry the fight of modern medicine into industry and into the home. It is the general practitioner on whose support any tuberculosis campaign firmly rests. It is the practitioner going into the homes of factory workers who has to realize and correct unhygienic home surroundings.

We believe that the pendulum is swinging to a more wholesome point of view of medicine. Indeed, room is found for every man. There may be supermen in such a scheme, but the general practitioner will form the mass of the army.—(*Modern Medicine.*)

PUBLIC HEALTH NOTES

How far health propaganda has taken hold of Ohio was illustrated recently when 60 samples of well water were received in one day from various parts of the state by the State Health Department for analysis. At times the samples are so numerous that the department laboratory finds it difficult to keep up with them. A varying percentage of the samples submitted show evidence of pollution involving typhoid and other infections, and in these cases reports are made and recommendations given for eliminating the danger.

—Retail distributors of foodstuffs in Dayton have been requested by the local public health league to cooperate in matters relating to the sanitary handling of such goods. During the first week of August the league conducted an effective campaign against the handling of food by prospective purchasers.

—Dr. M. V. Replogle of Bryan has succeeded Dr. J. W. Weitz, Montpelier, resigned, as health commissioner of Williams County. Dr. Replogle will serve on a part-time basis, receiving a salary of \$2,000 per year.

—At an eye clinic conducted jointly by the Commission for the Blind and the Highland County Health District in Hillsboro recently, 15 children were examined.

—An important step in an enlarged health program for the Springfield public schools has been taken by the board of education in appointing a full-time school dentist for the coming year. Heretofore a dentist has devoted one-half day a week to clinic work. Under the new arrangement he will be on duty throughout school hours, his program consisting of lectures on teeth, examination of the mouth, toothbrush drills and general work along prevention of disease and care of the teeth and mouth.

—Following the death of a Columbus boy from a rare form of infantile paralysis, after his return from a vacation at Camp Wilson, conducted by the Columbus Y. M. C. A. at Silver Lake, near Bellefontaine, an exhaustive survey of sanitary conditions at the camp was made by the State Department of Health and a group of Bellefontaine physicians. The investigation resulted in a clean bill of health being given the camp, there being practically no illness among the 150 boys and no other evidence of disease-producing conditions.

—Despite the continued heat of the early summer, Health Commissioner Peters of Dayton declares there has been less illness among babies and small children in that city this summer than ever before. He attributes this to the improved milk supply, which is either pasteurized or comes from tuberculin tested cows.

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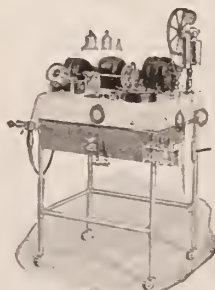
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Mellin's Food . . . 4 level tablespoonfuls

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To be given in small amounts at frequent intervals.

Each ounce of this mixture has a food value of 6.2 Calories and furnishes immediately available nutrition well suited to spare the body-protein, to prevent a rapid loss of weight, to resist the activity of putrefactive bacteria, and to favor a retention of fluids and salts in the body tissues.

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TO PHYSICIANS

—Miss Lota Lorimer of Cleveland has succeeded Miss Elizabeth Cocke as superintendent of the Cincinnati Visiting Nurses' Association. Miss Cocke and her assistant, Miss Eleanor Ewald, together with 14 nurses comprising the staff of the association, resigned their posts in late July.

—Speaking before the Ohio Welfare Conference at a meeting in Columbus recently, Mr. Fred C. Croxton, president, declared that it is his hope to have Ohio known as the state with the greatest possible vision in health and welfare work. Mr. Croxton believes that Ohio's health laws provide the state means of reaching this goal.

—From many suggestions as to how to render valuable service to the community, the Kiwanis Club of East Liverpool chose the establishment of home hygiene classes as a move to reduce infant mortality and curtail preventable diseases.

—The stamp of approval has been placed on Akron's six infant welfare clinics by a committee of the Summit County Medical Society. After an investigation of several weeks the committee issued a report praising the work of the clinics and recommending their continuation under the best medical ability available.

Orthopedic Clinic at Jefferson

A diagnostic clinic for children with the emphasis on cripples was held at Jefferson, on August 3, under the auspices of the county and state health departments. Dr. G. T. Wasson, the county health commissioner, was in charge of arrangements, assisted by five county public health nurses. Miss Natalie Merrill and Dr. William Mahoney represented the State Department of Health; Miss Mabel Smith represented the Charities Division, State Department of Welfare. Dr. Clarence Hyman of Cleveland was the consulting orthopedist and 19 local physicians and eight public health nurses were present. Other visitors included county and village officials, and officials from neighboring cities, villages, and townships.

Sixty-nine children were examined, and of these forty-five had conditions which could be remedied by operation, eight were referred to other specialists; fifteen could not be improved, and in one case there was no disease. Arrangements for the treatment advised are being made as rapidly as possible. The clinic was held for diagnostic purposes only and all cases will be referred to physicians for treatment. As usual infantile paralysis accounted for the largest number of deformities, 27 of the cases suffering from the effects of this disease. Five were suffering from the effects of tuberculosis. Eight were feeble-minded, and an effort will be made to secure institutional care for these. One case of incipient pulmonary tuberculosis was found. The county health department and the local medical profession will follow up the cases which attended the clinic.

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Solution of Benzyl Benzoate ---Miscible, H. W. & D.

many various forms of Benzyl esters and imitations of the original product have appeared. The claims for these preparations are as varied as their number and to some extent at least have served to confuse the medical profession as to the value of Benzyl therapy. For complete information as to the proper use of Benzyl preparations and a list of their indications, write

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The physicians who are administering the product are well satisfied with the results obtained. Silver-Salvarsan effects a more rapid disappearance of the contagious lesions than the other forms of Salvarsan and practically no reaction follows its administration.

SILVER-SALVARSAN is now ready for general distribution to the medical profession.

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THROMBOPLASTIN SQUIBB

FOR hemophillia and all cases of hemorrhage where mechanical interference is not indicated.

A true physiologic hemostatic, prepared from ox-brain tissue in accordance with the methods of Dr. Alfred F. Hess, Research Laboratory, N. Y. City Department of Health, and containing the principles of both blood and tissue upon which normal blood clotting depend.

The work of Hess has confirmed the findings of Howell and of Hirschfelder and has thoroughly demonstrated the value of the lipoid substances of brain extract in controlling hemorrhage.

Reports from unbiased observers give the clotting-accelerator value of Thromboplastin Squibb as from three to seven times that of hemostatic serum and other physiological hemostatics.

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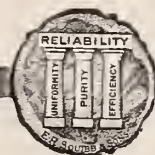
Indicated in all types of hemorrhage from small blood vessels and in cases of surgical bleeding where ligation is unnecessary.

Especially valuable in controlling hemorrhage after removal of adenoids and other nose, throat and oral surgery.

Both **Thromboplastin Squibb** and **Thromboplastin Hypodermic Squibb** are physiologically tested and standardized in the Squibb Biological Laboratories. They are marketed in 20 Cc. vials, through the drug trade.

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**Sterile, Surgical Catgut
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Plain, and Chromic (boilable),
60 inch and 20 inch.
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"Just what a ligature should be."

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The sanatorium is located at McConnellsville, Ohio (a town of 3000) upon a beautiful high hill, with picturesque surroundings, and a pleasant environment. It is built on the cottage plan, (each patient having either an individual cottage or a cottage with a sleeping porch for two) and equipped for the scientific diagnosis and treatment of pulmonary and laryngeal tuberculosis.

The cottages have all modern conveniences, such as individual call bells, hot and cold running water in each cottage, electric lights, and a very adequate supply of furniture.

Climate means nothing in the treatment of pulmonary tuberculosis, so why send your patients west? The climate in Ohio is as good as any. The cardinal points of REST, FRESH AIR, PROPER FOOD, AND REGULATED EXERCISE is the method of treatment used.

CLOSE PERSONAL ATTENTION IS THE MOTTO OF THE INSTITUTION.

Success in the treatment depends upon the stage of the disease at which the patient is admitted to the institution. The sanatorium acts as a "school" where patients are taught to live properly and to protect others. They also learn the value of rest. By giving your patient a short period of "schooling" he will be better prepared to follow instructions and will have increased his chances of arrestment of his disease.

When in doubt as to diagnosis, we will admit the case for observation and report.

COMPLETE X-RAY DEPARTMENT AND LABORATORY.

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RATES, \$28.00 per week, which includes everything except an X-ray examination, which is made on ad-
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Descriptive circular and other information on request.

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MEDICAL ECONOMICS

PUBLIC HEALTH - SOCIAL WELFARE *and* ORGANIZATION PROBLEMS WITH EDITORIAL COMMENT *by* D. K. M.

Public Health and Private Practice

Public health service may be considered essential for the prevention of disease.

Private medical service is essential to the treatment and cure of disease whenever presented as an individual problem.

There is always the dividing line between these two types of service and the meeting points for them raise serious and important questions which must be answered.

On this subject a writer in the *American Medical Journal* recently said:

"In the program of general welfare for which the popular demand is becoming more and more acute, there is developing throughout the country, at an increasing rate, an intelligent conception of the relative and absolute importance of service for the conservation and the promotion of the public health. Thus public health service, a development of recent times, appears in line with present and coming conditions, looming large with wonderful possibilities. The increasing popular demand for service both to prevent and to cure disease furnishes an unprecedented opportunity to the medical profession. Will the medical profession measure up to this opportunity? The majority of private practitioners of medicine, both individually and collectively (through their local, state and national organizations), endorse and promise to support public health work; but, in some instances, private practitioners, either as individuals or in groups, become the main objectors and obstructors to what appears, from the standpoint of the public interests an entirely reasonable program of public health service in a community. The private practitioner of medicine, in having skilled service to offer to the public, has filled and may continue to fill a vitally important place in our body politic; but if, because of erroneous ideas about his special rights and privileges, he gets in the way of progress for the general welfare, he will be run over by the procession—and that would be an unthinkable sorry place for him, with his glorious heritage, to take in these moving times. It is within the power of the members of our medical profession to do more than any other group of persons of like number toward the establishment and maintenance of reasonably adequate health service in every part of the United States."

As repeatedly stated in these columns, the state as represented by public health officials deserves the cooperation and commendation of the medical profession for all proper activities in disease prevention, and concomitant educational efforts to this end; which should not only aid in the prevention of the spread of disease, but in the appreciation for proper medical service.

The medical profession of Ohio as represented through the Ohio State Medical Association has set an example many times in the past for other states in the adoption of new policies, always based on thought of "public interest" rather than self-interest. It is obvious that if medical service is to continue and increase in value to the individuals representing the public, then the public as represented by the state must recognize, appreciate and reward such service and not attempt to commandeer it or usurp its natural field of activity.

As a possible definition and dividing line between proper state activities and the province of private medical service, and as a basis for discussion and final solution, the reference committee on legislation and public relations of the A. M. A., headed by Dr. J. H. J. Upham of Columbus, chairman of the Ohio State Medical Association's committee on public policy, suggested somewhat as follows:

The medical profession approves and indorses all activities and policies of states directed to the prevention of disease, but opposes the state treatment of disease, except (a) in the institutional care of the delinquent, diseased and defective; (b) the treatment of those diseases whose treatment is essential to prevention; (c) the recognition and securing or recommending the correction of common defects of school children.

It will be remembered that the House of Delegates of the A. M. A. adopted the following resolution, the general terms of which define nothing:

"Resolved, By the House of Delegates of the American Medical Association that it approves and indorses all *proper* activities and policies of state and federal governments directed to the prevention of disease and the preservation of the public health."

The latter resolution evades the issue and is open to any number of different interpretations, as practically every individual will have a different idea of the *proper* activities to be undertaken by the state. This seems to be an excellent opportunity for the medical profession in Ohio to again take the lead by clearly defining the proper inter-relationship between the state, the medical profession and the public. The profession of Ohio and the consistent policy of the

Ohio State Medical Association can be counted on to solve this problem both for the conservation and promotion of the best health of the community and the rights of the profession.

There must be not only a unanimity of ideas among the members of the profession on matters of such vital policy, but they must eventually and as soon as possible be crystalized into definite form as official expressions.

Replaced Vertebrae

"One of your vertebrae was out of place. I have replaced it and you will be relieved of your complaint."

The above falsehood represents the stock-in-trade of the average manipulator healing the sick under the guise of most of the drugless cults. The next time such brainless chatter is repeated in your hearing, you should challenge the miracle worker to obtain from a meat dealer the spinal column of a calf (veal) and in your presence actually displace with his finger one-thirty-second of an inch the body of one vertebra upon another. It can't be done.

The actual displacement by crushing weight of the vertebrae of a human being results in a "broken back" or a "broken neck," and generally results in death, in spite of the efforts of the most skilled surgeons, with the aid of anesthesia and powerful instruments to overcome the strength of the muscles, ligaments and interlocking structures concerned. It can't be done.

Actual displacement of vertebrae invariably results in complete paralysis of the body below the point of injury.

If it were not for the element of time and the tendency of half of our ailments toward recovery without any treatment, fads in the healing art would fail utterly.—*Pennsylvania State Medical Journal*.

Medico-Economic Experiment

After a consideration of 87 separate communities throughout the United States Mansfield and Richland County, Ohio, have been selected as the place in which the National Child Health Council will conduct an experiment based on a definite combination of local problems during the next five years, with the purpose of demonstrating what American communities can do for the most healthful and natural development of the children.

The Richland County Medical Society as well as local civic, business and welfare organizations, has pledged its full cooperation in the experiment. Elsewhere in this *Journal* is a more detailed account of just what this experiment is expected to accomplish, together with plans for determining the care and development of a child in community life.

This undertaking, in which over one hundred thousand dollars will probably be spent during

the next five years, is being watched with much interest not only in Ohio but throughout the country. Medical publications, social and welfare journals are anxious to report the steps in development. In speaking of the plans a lay newspaper, the *Boston Transcript*, comments in typical fashion in part as follows:

"Whether little Johnny and his sisters are enthusiastic does not appear from the published statements. Perhaps they are not yet informed as to what is in store for them. It is to be hoped that, as the organizations with the impressive names get busy in Mansfield, there will be added joy in the lives of the subjects of experiment. It is to be assumed, of course, that such will be the case, and that the youngsters will be looked upon as normal human beings, entitled to full measure of childish pleasures, instead of being regarded merely as laboratory specimens. The sunshine which fun and frolic pour into youthful hearts should not be lessened in a campaign in which, doubtless, much stress will be laid upon the value of sunshine of the other sort.

"Question arises whether the plans for the demonstration include efforts to mend the lot of the poor little rich child. It is not forgotten that, at the convention of the American Medical Association in Boston last June, doctors reported that they had discovered malnutrition to be as prevalent among the children of the rich and the well-to-do as among the children of the poor. If that condition obtains in Mansfield, certainly the poor little rich child should not be overlooked in the general endeavor to improve the health and strength of the rising generation.

"As described by its promoters, the direct objective of the experiment will be a practical demonstration of what a typical American community can do to increase the health and strength of the next generation. The Child Health Council, it is added, hopes to develop a program for child health so comprehensive and well balanced as to be of use to other communities all over the country. It is work which merits success, and which may be expected to produce results of value, even if it falls short of showing how to train the rising generation to a state of physical perfection."

Tune 'Em Up!

Local health authorities supported by boards of education and the public press in many Ohio communities have accomplished excellent results in a campaign for thorough and frequent physical and medical examinations.

With the approach of winter and the convening of the fall term in the public schools these efforts have been especially timely. Statements issued by health authorities with the approval of boards of education have urged parents to submit their children to thorough physical examinations by competent physicians at the outset of the school year. One board of education adopted the wholesome policy that a complete physical examination repeated at regular intervals is the only means of establishing the health condition of the child. A campaign of education for vac-

cination in those communities where needed was also quite successful.

Under the heading "Tune 'Em Up," the *Columbus Citizen* draws an interesting analogy in the following words:

"If you were getting ready for a cross-country drive you would perhaps have your motor all looked over and put in tiptop shape for the spin. You would avoid breaks and wearouts.

"Your children are getting ready for a spin. Their spin is not across the continent, but across the span of a winter's schooling.

"The Columbus board of education advises you to give your children as much attention as your motor. Just as timers, spark plugs, carburetors, and other motor parts get out of order, so do teeth, ears, eyes, nose, throat, stomach and many other parts of the children go bad at times.

"If parents would have the children looked over before starting them off for their winter's work, it might save many a break and wear-out; many a delay which retards the child in its physical, mental and moral development. It has been past experience with school authorities that pupils frequently have to miss school to get various kinds of necessary treatment that could have been well attended to in the summer or vacation period."

"A Little Way Off"

Perhaps unconsciously the editorial writer in a prominent newspaper recently expressed his true opinion of the so-called numerous varieties of "faith healers."

Apparently that particular writer was even anxious to be generous in judging those who without any special training claim all sorts of miraculous cures, either through prayers alone or some one incomplete method of treatment, ignorantly applied to all human ailments. His expression in the following words is both naive and illuminating:

"We often wish that the miraculous scenes they describe would happen a little nearer us, so that we could see them ourselves. But they always seem to be just a little way off, in the next town or the next county or else way off in some foreign country. We used to hope that the healer would travel and come our way. But some way these healers never seem to get very far. They are heard of for a short time only, and when next the dispatches report a miracle of healing, it is always a new healer. And then there are so many things we would like to know about these cures—chiefly, of course, if they stay cured, and also how sick they were before the cure and what the doctor has been doing for them.

"It is not that we are lacking in faith. We have it and believe in its curative powers; but it is our own experience that it has always worked best in connection with science and skill and care and common sense. . . ."

A Health Triumvirate

A helpful spirit of harmonious cooperation characterized the annual meetings of the health commissioners of Ohio, the Mississippi Valley Conference on Tuberculosis and the Ohio Public

Health Association in Columbus, the week of September 12.

A true keynote was sounded by Dr. James Alexander Miller of New York City, president of the National Tuberculosis Association, when he pointed out the possibilities in constructive work for the public good by the joint endeavor of public health officials and independent social agencies united and guided by medical men. He emphasized the possibilities in educational work through the enthusiasm and variety of contacts made possible by the social and welfare agencies interested in health, joined in support of the constituted health authorities. He pointed out that enthusiasm and interest of the former group, coupled with legal authority of the latter group, always needed as its spirit and guide the scientific knowledge of the medical profession in approaching the involved problems of public health.

This keynote was further acclaimed and amplified by State Director of Health Dr. H. H. Snively, who spoke of the necessarily restricted field of state and local health departments, but whose service to the public could be multiplied and increased by such groups and agencies with which the health commissioners were then meeting in joint session.

Ohio has been singularly fortunate in the type of leadership in public health work which has consistently extended its scope of usefulness, at the same time withstanding any temptation toward socialistic experiments.

The spirit of the joint conference was further exemplified in the annual meeting of the Ohio Public Health Association which is pursuing a sane and conservative though essentially constructive program along broad educational lines directed toward the public. Members of the Ohio State Medical Association will undoubtedly find cause for gratification in the election of Dr. C. D. Selby of Toledo as the incoming president of the Public Health Association. It will be remembered that Dr. Selby is a former secretary-treasurer of the Ohio State Medical Association and has been consistently interested in its organizational activities.

The imperative need for a more thorough understanding and cooperation between the medical profession and health authorities is now generally recognized. Such thought was recently expressed in the following clear manner by Dr. John D. McLean, chairman of the Section on Preventive Medicine and Public Health of the American Medical Association:

"The success of the future depends on a closer union between the physicians and the duly constituted health authorities. We might solve this problem very easily if we had in the United States a 100 per cent. efficient medical profession. Both you and I appreciate when this statement is made that it is true. Until that time does come, however, those doing their best must strive to accomplish more. If the medical practitioner could disabuse his mind of the idea that health

authorities order anything done, the two bodies would come much closer together.

"Rather than the health department giving orders to the medical profession, it would be more seemly for the physicians to give instructions to the health department. A combination of that enormous power enjoyed by the physician in his own community (that power being public opinion) and the lesser power of legal authority enjoyed by the health officer can accomplish almost anything. A union, therefore, could be very easily effected if the medical profession appreciated these facts. The operation of this union would be a specific recommendation. For instance, the county medical society with problems in the community could solve them in a definite way, the county medical society to outline the way. These directions, forwarded by the society to the health officials, would call for either an acceptance or an explicit reason for rejection.

"The medical profession has too long permitted the laws dealing with health to be interpreted entirely by a public health executive. This should be changed and we, the physicians of the country, must see that it is done.

"It is the duty of the physician to treat sick people and to keep people well. It is the duty of the health official to aid the profession in the control of all those suffering with some disease which might be communicated to another—two separate and distinct duties, both, however, looking to the same end: that is, a healthy people."

"Hands Off the Doctors"

That medical service, complicated as it is by the personal relationship and always changing factors, cannot be standardized either in the form of state medicine as generally understood, or even on the basis of compensation for individual service, seems to be well understood by the better and more influential lay writers.

Under the above heading a most interesting editorial appeared in the September 10th issue of *Collier's Weekly*, as follows:

"Some time back the Johns Hopkins Hospital trustees named \$1,000 as the maximum fee that ought to be charged for any operation. The public at large immediately jumped to the conclusion that overcharging by doctors was common throughout the country and that all fashionable practitioners were being censured.

"Now, nothing could be more untrue. The medical scamp, the quack, the selfish money seeker has been well-nigh driven from the ranks of the profession. Taken by and large, medicine is today the least commercialized, the most overworked, and the most underpaid of the essential skilled professions—excepting only teaching and the ministry.

"Nor are we inclined to cavil at the rather common practice of charging what the traffic will bear. Fees cannot be standardized, and there is ample ethical justification for charging Mr. Moneybags \$5,000 to yank out his appendix if thereby Dr. Soakum is given leisure to operate for nothing on a dozen tenement-house children in the clinic.

"Hands off the doctors, for they are not of the profiteer class. And even the big chargers never get their bills paid until the last—until the butcher, the baker, and the garage man have got theirs."

Another interesting viewpoint on this question

was expressed editorially in the *Ohio State Journal* in the following words:

"There are many ways to look at this matter. In the first place, there is the doctors' point of view. Although engaged in a calling which demands continual humanity and much charity, they have a right to their ambitions. If all are to be paid alike, where is the incentive to scientific progress?

"Then there is the question of service to the community. How shall the worth of the services rendered by doctors be estimated? Shall it be upon the value which the individual places upon his own life? If so, we would all be in the hands of a receiver after each recovery. Or should the doctor fix his fee according to the value of the individual in the community? Who could put down in dollars the value of such a service as saving Lincoln's life, if a doctor could have done it? When we have reached that ideal state where every one contributes directly and proportionately to the wealth of the world, and where every doctor's diploma is an assurance of the highest standard of skill—which can scarcely happen while human nature is human—then and not till then can all doctors' fees be measured by the same rule."

In commenting on the action of the board of trustees of Johns Hopkins Hospital the *Toledo Blade* says:

"The subject of limiting medical fees is very boggy ground. It causes one to remember that despairing Frenchmen who, after long observation, came to the conclusion that mankind, when it threw away an institution, adopted another that was worse.

"Now it has been an institutional custom among doctors to charge well-to-do patients high prices so that poor patients could be charged small prices or nothing at all. Some doctors, it is true, obey only the first part of that rule. But so many obey it in entirety that their profession can be credited with a sort of Robin Hood humanitarianism of sticking the rich to give to the impoverished. An attempt to fix fees at one end of the scale might easily lead to fixing fees all along the line. In that case, the rich patients will have to pay less than they customarily do today and the poor will have to pay more. Further, the official interference with fees on the part of a great hospital might be a step toward official action by government—the introduction of state medicine which for every good point has a thousand bad ones.

"Doctors are no supermen. They have their ambitions to be wealthy, their selfishness the same as other folk. Yet their profession, more than any other, has a workable code of unselfishness. The trouble about checking the grasping habits of certain physicians is that it might cause the finer impulses to fade and wither and become nothing worth considering. Remember our Frenchman. Before compelling one institution to die the death, even though the institution is seemingly abused, care should be taken to see that something worse does not follow."

Similar editorial thought in the *Marion Tribune* concludes with this statement:

"The physician is the first to respond in adversity—and about the last creditor thought of in prosperity. He alone and not a set of university trustees, should say what he feels he is entitled to."

In spite of the dignified reticence of the medi-

(Continued on page 696)

Relief of Pain in Labor*

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Editor's Note.—Dr. Gillespie is still an advocate of the use of chloroform in normal labor by the family doctor who must meet the emergency of obstetrical practice with the contents of his satchel. Chloroform, according to Dr. Gillespie, must be given only at the beginning of the pain, and to be truly successful must be applied to the mask before the patient is aware that the uterus is contracting, so that three or four full inhalations may be taken before the height of the pain approaches. Otherwise the patient will be busy sucking in the vapor when she should be holding her breath and bearing down for efficient progress. The amount of chloroform must vary with the force of the pain and the amount of voluntary effort of the mother; hence, it must be regulated by the obstetrician himself and not by an anesthetist who judges the requirements by the action of the patient.

IT IS not necessary today to discuss the propriety of relieving pain of labor. That was settled to the satisfaction of all men, open to conviction, by Sir James Y. Simpson and an army of progressive thinkers between 1847 and 1850.

It is rather irritating, however, to one who has throughout his professional life, been in the habit of using anesthetics throughout the second stage of labor, in all cases, to be classed as opposed to anesthesia, because he refuses to permit anesthetic experts to revise for him his methods, when the supposed experts show, with every utterance, a lack of familiarity with the actions of the agents they seek to supplant. For more than seventy years obstetricians have, without deleterious effects upon either mother or child, been securing comfortable labors during the second stage—the degree of comfort being dependent upon the skill and obstetric judgment of the individual doctor.

Outside of Boston, the birthplace of ether anesthesia, chloroform has been the anesthetic almost universally employed. Recently ether has been receiving more notice, chiefly by advocates of gas, to supplement the deficiencies of that agent. Simpson sought for and used chloroform, because of the inconveniences and discomforts of ether anesthesia, when pushed only to the obstetric degree. It would be difficult to imagine anything more uncomfortable than partial anesthesia under ether, and many women would stand a considerable degree of discomfort, rather than the choking, smothering sense of suffocation, which almost universally attends partial anesthesia under ether.

I have neither the desire nor the space for controversial disputation. I was asked by your chairman to write a paper for the family doctor, rather than the specialist, and shall keep constantly in mind his requirements. The man who must meet the obstetric needs of his clientele, along with all the emergencies of family practice, cannot fill the tonneau of his machine with obstetrical equipment. Many of his calls to obstetric cases will catch him away from home,

where he must depend upon the contents of an emergency satchel for the conduct of the labor. Fortunately, with such an equipment, it is possible to meet the requirements quite satisfactorily, if the right man receives the call.

HOW TO ADMINISTER CHLOROFORM IN A NORMAL DELIVERY

As soon as the os is sufficiently opened for the occiput to begin to protrude through it the expulsive stage of labor begins. At this time the administration of chloroform should also begin.

The method of administration is as different from surgical anesthesia as anything could be—indeed one skilled in surgical anesthesia is oftentimes an utter failure in obstetric anesthesia. The patient should be given to understand that not only her progress, but her comfort, will depend, in large measure, upon her voluntary efforts. She must be told that implicit obedience to orders will produce a comfortable degree of anesthesia as a reward, that disobedience will be immediately followed by the withdrawal of the anesthetic. Each promise must be implicitly kept.

The chloroform must be given only at the beginning of the pain, and to be truly successful must be applied to the mask before the patient is aware that the uterus is contracting, so that three or four full inhalations may be taken before the height of the pain approaches. This can only be done by the doctor constantly watching the uterus for the first sign of contraction. If one does not watch the uterus, and applies the chloroform to the mask only when the woman becomes aware of the existence of a pain, she will be busy sucking in the vapor when she should be holding her breath and bearing down, if efficient progress is to be secured. The amount of chloroform must vary with the force of the pain, and the amount of voluntary effort of the mother, hence, it must be regulated by the obstetrician himself, and not by an anesthetist, who judges the requirements by the actions of the patient.

Any anesthetic lessens somewhat the force of the uterine contraction, by lessening the reflex stimulation incident to the stretching of the fibers of the parturient canal. On the other hand,

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by producing comfort, it enables the patient to use her supplemental forces to better advantage, and thus more than neutralizes the adverse effects of anesthesia. The relaxing effect of the drug upon the pelvic structures lessens the resistance of the forces to be overcome by the advancing head, hence, anesthesia should promote progress rather than produce delay. If it does not the fault lies with the administering of it or the failure of the attendant to enforce obedience and secure efficient cooperation.

HANDLING DIFFICULTIES IN OBSTETRICAL ANESTHESIA

There are several difficulties which must be properly and promptly met if obstetric anesthesia is to be a complete success. Some women are greatly excited as a result of the first effects of the anesthetic. Simpson pointed out the remedy: push the effects till the patient loses consciousness, then let her come back to the state of obstetrical anesthesia, and she will give no further trouble. Some neurotic individuals, having tasted of relief, become obsessed with a determination to enjoy complete comfort, without making any personal contribution. The patient must be immediately convinced that you are the commanding officer of the expedition, that her duty is to follow orders explicitly, that the dope is compensation for service rendered and no work means no pay. She may scream, kick, and appeal to her friends, but if you are firm she will usually give in and behave according to orders. If she does not I immediately withdraw the anesthetic, set the dropper in full view and await negotiations for peace and concord. After a few pains, if the patient discovers that you are obdurate, she will open negotiations for peace. Now is the time to secure complete control of the situation. Impress upon her the following facts:

You can make her comfortable in exact proportion to the thoroughness with which she obeys your every command.

She is not to cry out with the pain but is to inhale deeply and secure its benefits.

When you call upon her to bear down, she is to hold her breath, fix her chest-wall, and *bear* down, repeating these efforts every time she is told to do so.

If she stops to argue that the pain is gone, and that, therefore, she can desist from her efforts, assure her that it is your object to destroy the consciousness of pain. If she does not instantly take your word that the uterus is contracting, and supplement its efforts you will withdraw the anesthetic and permit the pain to return. When she does well, encourage her not only with words of commendation but with a little more anesthetic at the beginning of the next pain.

But you must not only command the patient and dominate the situation, you must watch with a critical eye your own deficiencies. If the labor

is delayed by the anesthetic, lay the blame at your own door and strive to find where you have fallen short of a perfect technique. In this way alone may one arrive at the point where satisfactory results may be achieved. When the head is encountering the resistance of a firm unyielding pelvic floor, the uterus is apt to tire, and then the pains come with considerable irregularity as to force.

The common experience is to have pains come in a rhythm of three. A hard pain is followed by a feeble effort, this by one of moderate force, and then again comes a powerful contraction. When it is observed that this rhythm is present the anesthetic, and the patient's voluntary efforts, should be regulated accordingly. Progress will only be made during the strong pain, and the discomfort will be greatest at that time, hence a larger dose should precede this pain, and most of the voluntary effort of the patient should be concentrated at this time. If the pains come in a rhythm of five, artificial assistance should be thought of.

Some men blame chloroform with suspending labor. It is true that if the patient is tired, the administration of chloroform may appear to suspend labor. This effect is but transitory and after a few minutes of tranquil rest the contractions will return with increased vigor. If there is more than a transient suspension of contractions the chloroform is being unskillfully given.

One who has learned anesthesia in surgical practice will seldom be a success at obstetric anesthesia. The hardest thing to teach an interne, a surgeon, or a nurse who has been accustomed to give anesthetics, is to give all the chloroform at the onset of the pain. The temptation seems to be irresistible to make the administration continuous, or to delay giving it until the height of the pain, when the patient will be engaged in seeking relief, instead of adding her voluntary forces to the expulsive efforts of the uterus. In either case progress will be retarded.

Any agent capable of obtunding sensibility in the second stage of labor, will lessen the reflex stimulus to contraction, in direct proportion to its pain-relieving effect. If the voluntary efforts do not take the place of the involuntary force, progress will be delayed; but increased comfort renders it possible for the patient to work better, and in properly managed cases, progress is more frequently advanced than delayed.

In surgical anesthesia with chloroform, the agent is added drop by drop, and requires the constant attention of the one giving it. In obstetric anesthesia it is given at intervals of several minutes and by one who has other things to watch, hence there is difficulty in keeping track of the drops. If the mask is covered with linen, the wet spot can be seen even at considerable distance, and one soon learns to gauge the amount

given by the size of the spot. In general terms a spot the size of a dime, at the beginning of a pain, will give relief at the beginning of the expulsive stage. This is increased to a spot the size of a nickle as the pains become stronger or the voluntary effort is greater and as the external parts yield before the advancing head the amount is increased until momentary complete unconsciousness is produced as the head escapes.

If one is opposed to anesthesia one may frequently avoid the extra trouble by using ether, for it will enable many women rather to bear the troubles they have, than to substitute the discomforts of partial ether anesthesia.

OBJECTIONS TO ANESTHESIA IN LABOR

There are a number of objections which have been made to anesthesia in labor that have deterred some practitioners from employing it, especially in small communities where ones neighbors are opposed to the practice.

It is said by some to predispose to post-partum hemorrhage, and I have known able men who maintain, that in the few cases in which they gave it, the percentage of post-partum hemorrhage was high. Such men only give anesthetics to women who are exhausted, and exhaustion is the chief pre-disposing cause of hemorrhage.

He who, as a routine, gives anesthetics throughout the second stage of labor, will, by warding off exhaustion, prevent post-partum hemorrhage. On the other hand, experience has taught that anesthesia following delivery is exceedingly dangerous. There is no longer anything in the parturient canal capable of stimulating uterine contractions, and anesthesia, at this time, will produce such a large percentage of post-partum hemorrhage, that no question can arise as to the part played by the anesthetic.

To guard against this danger and yet spare the woman pain, I am in the habit of immediately placing all silk worm stitches, clamping them, and tying, after the placenta is delivered.

In a bad tear, requiring careful and extensive repair, the uterus should be thoroughly ergotised before the anesthetic is given. There seems to be little difference what agent is employed: any anesthetic given after delivery predisposes to hemorrhage, but the primary stimulating effect of ether makes it especially safe in the post-partum operations.

THE FIRST STAGE OF LABOR

Some practitioners are firm believers in the relief of pain during the expulsive stage but ignore in practice the sufferings of the first stage of labor. After careful observation running over many years, in a practice made up largely of difficult labors, I am firmly convinced of the following fact. *The relief of pain during a long first stage of labor is more important than anesthesia in the second stage.*

It may be laid down as an axiom, that, in direct

proportion to the intelligence of one's management of the first stage of labor, will his troubles in the second stage diminish. This being true, it follows, that one may secure more benefits in labor from the intelligent use of analgesics, than from anesthetics. Among the advantages secured from the relief of pain during the first stage of labor I can discuss but a few. Those of you who have studied this subject can easily supply others.

THE PREVENTION OF SEPTIC INFECTION

It is the exhausted woman who most readily acquires septic infection, because her resistance is lowered. The woman who quickly rallies from the exhaustion of labor seldom develops infection, while the one who remains in an exhausted state for twenty-four hours, will usually run a febrile course and a large percentage of such cases will develop true sepsis. This is not only true of those who have been handled for many hours without proper aseptic precautions, it is true just as certainly, though to a less degree, where every precaution has been taken throughout the labor.

The reasons are obvious. There are to be found in the vaginal tract of most pregnant women, organisms capable of producing infection. We need not assume the introduction of infection during labor, for these women are already potentially infected, and may at any time become positively infected, if nature's defenses are broken down. These defenses consist of constitutional resistance to infection and the restraining influence of the normal vaginal secretions.

It was recognized by the early writers that the hot dry vagina was a sign of danger on the part of the mother, and Smellie, more than one hundred and seventy years ago, knew the remedy and gave opium whenever this sign of exhaustion and danger was encountered. Anyone with experience in consultation obstetrics, is familiar with the hot dry vagina, encountered long before operative delivery is indicated, and he is a poor practitioner, if he has not seen this sign of danger subside under opiates. Associated with this condition, is always found a state of nervous irritability, amounting in some cases almost to frenzy. It is the nervous exhaustion which produces the hot dry vagina. This condition releases the vaginal micro-organisms from the restraining influence of the normal vaginal secretions and promotes septic infection. The patient who has been kept reasonably comfortable during the first stage of labor, does not develop the hot dry vagina, unless positive impaction of the head in the pelvis occurs, hence, analgesics are a safeguard against infection.

The relief of pain in the first stage of labor is just as different from the relief of other types of pain, as is anesthesia in the expulsive stage different from surgical anesthesia. In most other painful conditions, having secured comfort, the patient may rest, in this type of pain, the patient must perform the hardest labor of her existence.

Hence larger doses are called for, than would be needed by a patient under other circumstances, with equally acute pain. To give an eighth or a sixth of a grain of morphia in labor is like practicing Christian Science without prayers. A fourth of a grain is usually an aggravation. If the woman is small or the pain not severe three-eighths of a grain may suffice but usually one-half grain is the obstetric dose of morphine.

If this is given as soon as the first stage of labor is well started, it will usually carry the patient through the first stage in reasonable comfort, and the expulsive stage will begin with the woman fresh and vigorous.

CONDITIONS FORETELLING DIFFICULT AND TEDIOUS LABOR

Among the many conditions which enable one to foretell a long, tedious and difficult labor with considerable certainty are: (1) disproportion between the head and pelvis; (2) posterior position of the occiput in a primipara; (3) breech presentation in a primipara with a narrow rigid canal; and (4) descent of the head until it is almost in contact with the pelvic floor before labor comes on.

The last condition in a primipara often leads the inexperienced to prognosticate an easy delivery and after twenty-four hours the consultant is called to find the woman exhausted and conditions practically unchanged.

In such cases hyoscine may, with great advantage, be added to the morphine. If given early, more relief will be secured from three-eighths of a grain of morphine, and one two-hundredths of a grain of hyoscine, than from half a grain of morphine, with the additional advantage of having the patient sleep in the intervals between pains, and sometimes through the pains themselves, until the expulsive stage of labor is reached. If the case requires considerable moulding an additional dose of morphine may be required, but after the first dose no hyoscine should be given.

For many years I have never given scopolamine with the morphine, unless I felt certain that more than four hours would elapse before the birth of the child, because of the frequency with which difficult resuscitation of the child occurred, when this precaution was not observed. It seemed to be a true narcosis and the slow irregular respiration continued for a long time. That the advocates of scopolamine are wrong in blaming morphia, and absolving hyoscine from responsibility for danger to the child, I am quite convinced by personal experimentation, which has demonstrated two facts. (1) Morphia in even larger doses does not give such a percentage of children who are hard to resuscitate. (2) Hyoscine alone will produce it.

The effects of this combination are so ideal, with this exception, that one who has reaped its benefits in practice, is loath to abandon it. No

other method produces such ideal results, but having become convinced of its dangers to the child, one is compelled to curtail its application within pretty narrow limits.

Fortunately by the combined use of morphia and chloral almost as good results may be obtained. If morphia is given to the point of reasonable comfort, but the patient is restless, and does not sleep between pains, thirty grains of chloral will usually secure this desirable effect, and in no way unfavorably influence either the progress of the labor, or the resuscitation of the child.

If chloral is given alone, it is foolish to expect good results from less than forty-five grains, and sixty is better. If given when the os is actively dilating, it will not be retained if swallowed. The stomach is always irritable when active uterine dilatation is occurring, and chloral is, under the circumstances, as emetic as ipecac. Under these circumstances sixty grains should be given per rectum in three ounces of water and is seldom expelled.

Any of the hypnotic drugs will give some relief in labor. I have experimented with most of them, but always to return to chloral as the most available and manageable.

CONCLUSION

There are many things which should be discussed if this subject were to be handled exhaustively. My problem today is to present methods for the family doctor, which, if thoroughly studied and skillfully applied, will result in comfortable labors, with increased safety to mother and child. If he will master the details of handling these agents, he will find that little is left to be desired, and that the total equipment necessary may readily be carried in an emergency case.

PROPAGANDA FOR REFORM

The Schick Test.—The Schick test for determining the degree of immunity to diphtheria is no longer a novelty. Many of those giving a positive reaction have been successfully immunized in the face of impending danger. Park of the New York Board of Health asserts that a negative Schick in cases in which there is active immunity, either natural or acquired, when the toxin used and the technic employed have been suitable, gives an almost complete security from diphtheritic disease, not only for the immediate time but also for the future.—(*Jour. A. M. A.*, Aug. 27, 1921, p. 708.)

BOOKS RECEIVED

That Bogey Man, The Jew, by G. Frank Lydston, M. D., D. C. L., author of *Over the Hookah*; *Blood of the Fathers*; *Poker Jim, Gentleman*; *Panama and the Sierras*; *Diseases of Society*; and *Trusty 515*. The Burton Company, publishers, Kansas City, Mo. Price, prepaid, \$1.25.

A Consideration of the Various Methods for Shortening Labor*

A. J. SKEEL, M.D., F. A. C. S., Cleveland

Editor's Note.—Dr. Skeel does not believe that we are yet ready to adopt operative interference to deliver mothers of their babies, as soon as the obstacle of the cervix has been removed by nature. A considerable percentage of women will deliver spontaneously, in a reasonable time, with little damage to themselves and with relatively little pain, if suitable narcosis is employed. Others will deliver themselves or be delivered artificially later, with injury to the baby, with serious damage to the vaginal tract and after the mother has been exhausted by her efforts. It is the business of obstetricians, difficult as this may be, to distinguish the one prospect from the other, before, not after, the damage has been done. Better diagnoses must be made and better surgical judgment must be developed regarding the patient's vital factors, the estimation of the bony outlet and its resistance as well as the elasticity or friability of the soft parts. Having properly selected his patients and classified them as normal or pathological, the real obstetrician will deliver by the method best suited to the particular case, whether by normal labor, version, forceps, episiotomy, manual perineal dilatation or Caesarean section.

THE purpose of the writer, in presenting this paper, is not to develop discussion, concerning the technicalities of the obstetric procedures designed for the purpose of shortening labor, but rather to arouse thought concerning the propriety and desirability of terminating this function artificially, as a matter of prophylaxis.

THE OLDER CONCEPT OF NON-INTERFERENCE

Those of us who have been practicing the art of the accoucher for longer than a decade were taught to regard nature's method of delivery as an example, of the perfected handiwork of The Great Master Mind, and one of our earliest tasks was to learn in detail the mechanism, by which this was accomplished.

One of the axioms in midwifery has been to so master the natural processes of labor that when anomalies occurred we might restore natural conditions or imitate natural methods in our own interference. So great has been the traditional reverence, for all that pertains to natural delivery, that even attempts to relieve pain were condemned. Holy Writ was called upon and the man who offered the relief from pain afforded by chloroform was accused of violating the command, "In sorrow shall thou bring forth children." We all know the retort made to this accusation, "That the Lord himself was the first to use anesthesia, having caused a deep sleep to fall upon Adam while he removed the rib from which Eve was created."

Those of you who are older well remember the frequency with which vesico-vaginal fistula was met so many years ago, due to the doctor's reluctance to use obstetric forceps before all hope of spontaneous delivery was past. The condition is now almost unknown, and this happy state of affairs has been brought about by removing the baby before pressure necrosis of the

vesico-vaginal septum has had time to occur.

The discovery of the bacterial origin of child bed fever led to prolonged discussion of the methods by which puerperal women were infected. In the pre-aseptic period it was soon demonstrated that the examining finger of the physician was most frequently culpable. First the doctor learned to avoid contamination from the post mortem table, to wash his hands, etc. Then came the various processes of hand disinfection, and finally the rubber glove. Soon we discovered that repeated examinations even with the carefully prepared and gloved hand inevitably introduced pathogenic bacteria. Even the ante partum vaginal douche was reluctantly abandoned after statistics had proved that it caused more harm than good.

The last step taken along this line of thought i.e.—the prevention of infection by avoiding the introduction of bacteria, was rectal examination. Some clinics now allow students to make no routine vaginal examinations whatever, and undoubtedly this custom has diminished somewhat the frequency of endogenous infection.

Although we have gone to these extremes to prevent sepsis, although we have practiced and taught asepsis, and preached it from the hilltops, still infections do occur with sufficient frequency and at times so unexpectedly that we must realize the limitations of the methods. The doctrines of watchful expectancy and the condemnation of meddlesome midwifery have been carried to the limits of human possibilities, yet admittedly our results are not all that could be desired.

THE NEW METHODS OF INTERFERENCE

Recently there has come into prominence a school of thought that is brushing aside much that we believed we had learned; that is, practicing and teaching various methods of cutting short the time required for delivery, and with results so good that we must put preconceived notions aside at least long enough to investigate its practices. We must try to learn why the pa-

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tients of these men have no more infections than our own.

Several years ago there appeared, at the Indianapolis meeting of The American Association of Obstetricians and Gynecologists, a man from Buffalo who advocated that the majority of pregnant women be delivered by internal podalic version under deep anesthesia, at the termination of the first stage of labor. We declined to publish his paper, but he came back year after year with complete reports of his work, until even the most skeptical were convinced that for some reason or other Dr. Potter is able to deliver personally, approximately one thousand women annually, by internal version with results as good as those attained by watching nature perform. Hardly had we recovered from the shock of this discovery before the one-time staunch advocate of watchful expectancy, De Lee, of Chicago, a man of scholarly attainments and enviable standing, reversed his previous teaching and advocated early delivery of primipara by lateral episiotomy and forceps applied to the head in mid-pelvis. He affirms his satisfaction with the method, and assures us that his results justify his changed practice. Not only do these men show statistics proving no increase of infections, but they claim with every appearance of accuracy, to leave their patients in better physical condition than by the older procedures. It is asserted by these men that they have fewer lacerations, less real damage to the genital canal than the plan of watchful expectancy, with interference only when necessary, has produced.

AVOIDING PROLONGED LABOR

Why have these men been able to violate all that we thought we had learned about the introduction of bacteria into the genital tract by manipulation, introduction of hands and instruments, with no increase in the incidence of infection? Have they brought the practice of asepsis to greater perfection than the rest of us? I have seen the work of both of these men and have learned nothing new from them about aseptic technique.

We might have learned the lesson their results are teaching us, from our own experience with Caesarean Section, had we only looked with open minds. What are the danger posts of infection in abdominal Caesarean? They are long labor, repeated examinations or instrumentation, and lapse of time after rupture of the membranes.

If these factors are responsible for the development of pathogenic bacteria in the uterus when Caesarean Section is performed, then they will do exactly the same thing in the uterus which has not been so operated. The only difference is that when section is done, peritonitis results and their presence and growth are promptly demonstrated. In prolonged vaginal delivery we have the added factor of continued devitalizing of the tissues, by pressure of the

head upon the soft parts, within the pelvic canal.

The conclusion seems clear that we have been giving relatively too much thought and attention to the risk of *introducing bacteria* and too *little consideration* to the *factors which favor their development*.

The surgeon long ago learned the lesson that he could not prevent infection of his incision, by methods designed only to keep bacteria out. He learned that in addition to asepsis he must avoid devitalization of tissue, whether by strong antiseptics, by bruising, or by any other process. He learned to preserve the vital resistance of the tissues in which he operated.

To the writer it seems we have overestimated the risk of infection, from early aseptic operative delivery. Our previous statistics on this subject have all been based on series of cases, in which operation was postponed as long as possible. This was exactly the factor which made us so long fear infection from Caesarean Section. When we learned to operate early upon those cases in which hysterotomy was indicated, we found that infection did not occur. Our first statistics in large numbers concerning early vaginal delivery are given us by the men whose work we are considering. Early operative delivery obviates the disadvantage of repeated examination and of prolonged delay after rupture of the membranes. In previous practice exactly the cases which were operated, were the ones in which numerous examinations had been made. Apparently we have not viewed with sufficient gravity the increased risk from prolonged labor, from bruising, and from diminished cell vitality, caused by prolonged pressure.

THE PRESENT PROBLEM

The question which arises is not, shall we do a De Lee prophylactic forceps, or a Potter version. The real question is, shall the average obstetric case still be treated on the old plan of watchful expectancy without interference, or shall the obstetrician proceed to deliver artificially, as soon as conditions render such interference practical? Do the hours of waiting, during the second stage of labor, while the patient is becoming exhausted, while the pressure of the child's head devitalizes the tissues of the vaginal canal, produce damage sufficient to warrant surgical extraction of some type? The question is a fundamental one, not merely a matter of choice of procedure. That must be settled after the former is answered. Potter claims to have as many living babies, as many uninfected mothers, as much freedom from laceration, with his method, as can be shown by following the plan of watchful expectancy, with spontaneous delivery. De Lee claims to get better results from his plan of episiotomy and forceps delivery than he obtained formerly, by waiting for nature to deliver and interfering only when forced to do so. It cannot be gainsaid that if the obstetrician can

relieve the mother from the pain and exhaustion, incident to furnishing the motive power for expelling the child; if he can do this without harm to either mother or child, if it is a fact as De Lee and Potter claim that the mothers are left in better condition by early operative relief, than by late spontaneous delivery, then indeed we are arriving at a new era in obstetrics and must as accouchers adopt the newer methods.

PROPHYLACTIC DIAGNOSIS AND PROGNOSIS

However, I cannot forget that not many years ago, when the discussion as to medical or surgical treatment of appendicitis, was at its height, certain skillful surgeons proposed that inasmuch as the appendix is so troublesome an organ, it be removed by operation upon the perfectly healthy individual. Experience showed that medical treatment saved seventy-five per cent. of appendicitis cases; that operation saved ninety per cent. of them, and that early operation saved ninety-five, ninety-six or ninety-seven per cent. of these cases; while a skillful operator could remove a normal appendix, from a healthy abdomen with scarcely a death per thousand. Why not then as a matter of routine operate upon well individuals, remove from them this dangerous part of their anatomy, and save hundreds of individuals from a premature grave. Yet how many in the audience have any desire to be saved from possible death, in this manner? What has been the answer? It is more accurate and complete diagnosis. The healthy appendix is left alone, the diseased appendix is removed before it has had an opportunity to make trouble.

So I do not believe that we are yet ready to adopt routine operative interference, to deliver mothers of their babies, as soon as the obstacle of the cervix has been removed by nature. A considerable percentage of women will deliver spontaneously, in a reasonable time, with little damage to themselves and with relatively little pain, if suitable narcosis is employed. Others of these women will deliver themselves or be delivered artificially later, with injury to the baby, with serious damage to the vaginal tract, and after the mother has been exhausted by her efforts. It is our business, difficult as this may be, to distinguish the one from the other, before not after the damage has occurred.

Better diagnoses and prognoses must be made, and better surgical judgment must be developed. The obstetrician must learn to judge the patient's vital factors as the surgeon does. He must learn to estimate with delicate accuracy and nicety, not only the bony outlet and its resistance, but also the quality of the soft parts as to elasticity or friability. He must be master of his art as the best surgeons are masters of their art. Having properly selected his patients he will act accordingly. The really normal cases he will relieve of pain as completely as possible, and allow natural forces to deliver the woman

of her baby. He will classify as abnormal those women who can deliver only with serious damage; these are pathological, and must be treated as such, by the method best suited to the particular case, whether version, forceps, episiotomy, manual perineal dilatation or Caesarean Section. But the expert obstetrician will make his classification before the damage is done, and will either operate early or stay his hand accordingly. We have learned to do this in cases where the question of Caesarean Section is involved. We must learn to do the same thing when operative vaginal delivery is concerned. We must learn prophylactic prognosis, and do its bidding.

OSBORN BLDG.

Acute Torsion of the Great Omentum: 2 Case Reports

By JOSEPH PRICE, M. D., Columbus

Editor's Note.—Acute torsion of the great omentum occurs sufficiently to be considered as a possibility in a typical acute abdomen, especially in male patients with a pre-existing hernia and a low polynuclear count. Early operation is life-saving and complete recovery is to be confidently expected.

SINCE THE year 1903, reports of torsion of the great omentum have occurred in surgical literature with sufficient frequency as to justify surgeons in considering its possibility in any case of *acute abdomen*, in which the symptom-complex presented is atypical.

The condition is said to occur twice as frequently in males as in females. It is also more apt to occur in patients with pre-existing hernia. This was true in the two cases herewith reported. Both patients were males, and both had right inguinal hernia. But in neither case was the tip of the omentum mass found attached to the hernial sac at the time of operation.

Diagnosis.—The diagnosis is easy after the abdomen is opened. That it is quite difficult before the abdomen is opened is evidenced by the fact that the majority of all reported cases have been diagnosed as appendicitis. The leukocyte count is the most reliable diagnostic point, especially a low polynuclear count.

CASE REPORTS

Brief histories of two cases operated at Mercy Hospital follow:

Case 1.—Patient was a physician engaged in general practice, aged 43 years, who took sick suddenly on the night of December 31st, with pain in abdomen, and was admitted to Mercy Hospital at 8:30 a. m. next day.

The patient had been in his usual health and engaged in active practice of his profession up to and including the day before admission. He had had right inguinal hernia for several years, easily reducible. He complained of pain over the en-

tire abdomen, was nauseated, but there was no vomiting. Tenderness was most marked over McBurney's point. The white count was 10,000, with the polynuclears 72 per cent., and the urine negative. *Diagnosis*—Appendicitis. Temperature 99.2°. Pulse 100. Respiration 24.

Operation revealed a quantity of free bloody fluid in the abdomen and a large dark-colored mass, formed by omentum twisted into a thick rope, which was clamped, tied at the base and removed. The appendix was not inflamed, but was removed. The fluid was also removed, and the abdomen closed without drainage.

The patient made an uneventful recovery and left the hospital after two weeks.

Case 2.—H. V., aged 39 years; occupation, waiter. Admitted to Mercy Hospital at 11 p. m., July 27, 1921.

The chief complaint was pain in the abdomen, with *belching of gas*. Patient had a right inguinal hernia, easily reducible. Had also had previous operation for left inguinal hernia. This has recurred at present time. Present illness began at 11 p. m., July 19th, with sudden severe pain in lower right quadrant of abdomen. Patient was nauseated, but did not vomit; also complained of gas in stomach and constipation.

Tenderness extended over entire right side of the abdomen, but was most marked over the gall-bladder area. The white count was 14,000, with the polynuclears 78 per cent. The urine was negative. Temperature 100°. Pulse 100. Respiration 20. *Diagnosis*—Appendicitis.

Operation revealed torsion of the omentum. A large black mass, almost gangrenous presented, and there was free fluid in abdomen. The omental twists were unwound and spectators counted nine turns. The omentum was ligated at the base and the mass removed, as well as the fluid and the abdomen was closed without drainage. The patient made an uneventful recovery, and left the hospital August 5th, two weeks after operation.

CONCLUSION

Any case of *acute abdomen* symptoms which does not coincide with those usual to gall-bladder, appendix, or ulcer (perforated), especially if occurring in male patients from thirty to fifty years of age, with pre-existing hernia and without marked leukocytosis and a low polynuclear count, is entitled to be thought of as possible cases of torsion of the omentum.

1452 S. HIGH ST.

The Prevention and Control of Diphtheria*

ROBERT LOCKHART, M.D., Cleveland
District Health Commissioner, Cuyahoga County

Editor's Note.—The fact that morbidity and mortality rates from diphtheria have remained almost the same for the past ten years, would prove that some new weapon must be employed in the fight against this most mortal enemy of childhood. From an extended experience as District Health Commissioner of Cuyahoga County, Dr. Lockhart concludes that vaccination against diphtheria with toxin-antitoxin is more effective than anti-typhoid vaccination and probably equally as effective as smallpox vaccination. In addition, it would appear that if we wish to have an actively immune population of children, this can be accomplished by using the toxin-antitoxin injections. In holding these views Dr. Lockhart has the support of many noted clinicians and prominent health commissioners of the country.

DIPHtheria is one of the few communicable diseases that we know how to cure, to prevent and to control. Yet, the number of cases of diphtheria is increasing each year in many States of the Union. In our own State of Ohio, there were 7,257 cases of diphtheria reported to the State Department of Health in 1919. During the past year of 1920, 8,587 cases of diphtheria were reported to the Department. This does not necessarily mean that there were actually more cases of diphtheria in 1920 than in 1919. It may merely signify that the physicians were more careful in reporting their diphtheria cases. However, it is safe and reasonable to say that the number of cases of diphtheria did not decrease.

GENERAL CONSIDERATIONS

The mortality and morbidity reports on diph-

theria have remained fairly constant during the last ten years. This would indicate that some other measure, or measures, in addition to those that have been used for the past ten years must be employed. The specific remedy against diphtheria, antitoxin, not only cures diphtheria but will prevent those who have been exposed to a diphtheria case, or a diphtheria carrier, from developing the disease. This immunity which is produced by anti-diphtheria serum is a passive immunity and may last only twelve days. The immunity usually persists for two to three weeks. A person who lives in the same house with a case of diphtheria and is constantly exposed to the patient, should be reimmunized at the end of two weeks. This simple precaution will often prevent the development of secondary cases of diphtheria in the family. It was once thought that making cultures from the nose and throat of diphtheria cases and contacts, would check the spread of diphtheria and eventually eliminate

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the disease. Bacteriological cultures for diagnostic purposes and for the release of the patient and exposed individuals from quarantine, have often and still do, check the spread of diphtheria. The large percentage of unrecognized, more or less, constant carriers of diphtheria bacilli have probably prevented the taking of cultures from materially reducing the number of cases of diphtheria below a certain minimum.

So we reach the conclusion that diphtheria antitoxin as a curative and preventive measure of diphtheria is a specific and can never be dispensed with. Yet we also conclude that if we desire to reduce the incidence of diphtheria still further some other preventive measure must be employed. Fortunately for the medical profession and for humanity, there has been discovered a simple, harmless and cheap method of preventing diphtheria. We refer to toxin-antitoxin immunization against diphtheria.

PREVENTING DIPHTHERIA

These toxin-antitoxin mixtures produce an active immunity to diphtheria, which lasts two to four years and in some cases may last for a lifetime. It requires an interval of from eight to twelve weeks for the antitoxin to be formed in the blood of the individual receiving the treatment. This is in contrast to the immunity to diphtheria which is produced by antitoxin. This antitoxin immunity is an immediate, passive immunity and temporary, rarely lasting over two weeks. Physicians should bear in mind this distinction between the immunity produced by antitoxin and the immunity conferred by the toxin-antitoxin mixtures. The antitoxin immunity is passive, immediate and temporary. The toxin-antitoxin immunity is active, delayed and permanent. It is stated by Park, in his book on Public Health, that 95 per cent. of those who take three doses of toxin-antitoxin are immunized. Of the 5 per cent who are not immunized, there are 80 per cent. who may be successfully immunized, by a repetition of the treatment. Seventy per cent. of those who receive one dose of the toxin-antitoxin are immunized, and eighty per cent. of those who receive two doses are immunized.

The toxin-antitoxin mixture as used by Park and Zingher, of New York City, is slightly toxic. The physical reaction from a dose of toxin-antitoxin is slight, often absent altogether, and usually subsides in twelve to twenty-four hours. The same precautions in administering toxin-antitoxin should be taken that are observed in using ordinary antitoxin. The supply of adrenalin chloride 1/1000 should always be on hand so that if there are any signs of anaphylaxis, or serum sickness, this wonderfully effective antidote can be at once given. The danger from serum sickness in toxin-antitoxin administration is less than in the giving of antitoxin, since the amount of horse serum is decidedly less in the former than in the latter.

THE SCHICK TEST FOR DETERMINING SUSCEPTIBILITY

In addition to having toxin-antitoxin to use to produce an active, permanent immunity to diphtheria, the medical profession also can by using the simple, harmless Schick test, determine those who are immune and those who are susceptible to diphtheria. This Schick test can determine for us in a few days' time those who are immune and those who are susceptible to diphtheria. It also determines whether or not our toxin-antitoxin injections have rendered the patient immune. The technic of the Schick test is simple, easy to learn and easy to apply. It is probably the most reliable of all the intracutaneous tests for susceptibility to disease that have been so far introduced.

The value of the Schick test and toxin-antitoxin immunization against diphtheria cannot be better illustrated than by quoting the summary of a paper by Dr. Abraham Zingher which was recently published in *Health News*, the monthly bulletin of the New York State Department of Health:

"1. Diphtheria is a widely prevalent disease with a morbidity and a mortality which have remained fairly constant during the past ten years.

2. Active immunization with toxin-antitoxin of all young children from six months to two years of age is essential in bringing up a diphtheria immune population.

3. The Schick test and control test should be applied to all children over two years of age, and all those giving a positive reaction should be actively immunized with toxin-antitoxin.

4. The Schick test and toxin-antitoxin immunization will find great fields of usefulness in homes, in various schools, institutions, hospitals, etc.

5. Diphtheria outbreaks can be completely controlled in homes, institutions and schools by promptly applying the Schick test and by giving prophylactic injections of antitoxin to susceptible individuals."

METHODS OF UTILIZING PROPHYLAXIS

These recommendations of Zingher are now being carried out in New York City. Physicians are being supplied with outfits for giving the Schick test and with the toxin-antitoxin mixtures by the City Department of Health. On May 1st, 1921, a nominal charge of twenty-five cents will be made for the Schick outfit and the same amount will be charged for the toxin-antitoxin mixtures. Hospitals, clinics and custodial institutions will be supplied, as heretofore, free of charge by the Central Laboratory. This method of securing a population of children actively immune to diphtheria is probably well suited to the needs of New York City.

However, in smaller cities and in rural communities, the method now being employed by Gerstenberger, of Cleveland, in our opinion should be given the preference. At the Babies' Hospital and at the Health Centres in the City of Cleveland, children, between the ages of six months and six years, are being given the toxin-

antitoxin mixtures without a previous Schick test. This plan has several features which recommend it to the careful consideration of health officials and the medical profession. In the first place, there is no delay. The child can have a dose of toxin-antitoxin on the date of its first visit to hospital, or dispensary. The mother, or nurse, will have to make fewer visits. Another thing that recommends this procedure is that such a small percentage of children under six years of age have an immunity, either natural, or acquired, to diphtheria. Of children six years of age only about 25 per cent. have an immunity to diphtheria. Again, the immunity of children under six years of age is often not absolute. That is, it is a relative immunity which they possess against diphtheria. For instance, the child might have twenty or thirty diphtheria bacilli in his throat, and would not develop a case of diphtheria. But if he should have forty or fifty of the diphtheria microbes on his tonsils, or in his nasal passages, he would have a clinical diphtheria. Another reason why the children under six years of age should receive toxin-antitoxin as early as possible, is because the mortality in that period of life is so high. About five-sixths of the deaths from diphtheria occur under the age of six years. The procedure of giving the toxin-antitoxin without a previous Schick test is also recommended by its simplicity and its analogy to smallpox vaccination and anti-typhoid vaccination. It would seem from the favorable reports that are coming from Boards of Health in many cities of the United States that immunization, or vaccination against diphtheria, gives a more lasting immunity than anti-typhoid vaccination. These reports also indicate that a few more years' use of the toxin-antitoxin immunization will probably demonstrate that the immunity is fully as effective as smallpox vaccination.

The arguments in favor of giving toxin-antitoxin without a previous Schick test, may be summarized as follows:

1. The small number of children under six years of age who are immune to diphtheria, that is, only 25 per cent.
2. The high mortality from diphtheria in children under six years old, namely five-sixths of those who die from diphtheria are less than six years of age.
3. One is more likely to immunize a larger number of these young children, if a dose of toxin-antitoxin is given at the first visit to hospital, dispensary, or office.
4. Children under six usually have only a relative immunity to diphtheria. This relative immunity may be increased by the toxin-antitoxin injections.
5. It is much easier to explain to mother, or nurse, that you are merely vaccinating her child against diphtheria. It is not always easy to make them understand the Schick test.

It is probable that for children under six, the Schick test is most valuable for determining the

fact that the child has been rendered immune to diphtheria by the toxin-antitoxin injections.

In children of school age, that is, from six to eighteen years of age, the Schick test should be used, before administering the three toxin-antitoxin immunization treatments. There are two good reasons for this statement. One is that about fifty per cent. of children of school age are immune to diphtheria. The other reason is that the mortality from diphtheria in this age period is not high.

In case of an outbreak of diphtheria in schools, or other groups closely associated, it is a good plan to make a Schick test on all the children. Then those who give a positive Schick, may be given the toxin-antitoxin to produce a permanent immunity. However, any of those having positive Schicks who have a history of a definite exposure to diphtheria should be at once immunized with the usual 1,000 units of antitoxin.

PREVENTION IN RELATION TO EPIDEMIC DIPHTHERIA

Health Commissioners who desire to introduce the use of toxin-antitoxin in a village, or city, often have the opportunity in case of an epidemic of diphtheria. Last winter this was done in Cuyahoga County in two of our villages where there were small outbreaks of a mild diphtheria. Several hundred of the children had the Schick test and those who were found susceptible to diphtheria were advised to have the toxin-antitoxin immunization treatment. The parents of each child who gave a positive Schick received a letter from the Board of Health, explaining in a few words that their child was susceptible to diphtheria. They were further informed that their family physician had been supplied with the toxin-antitoxin by the Board of Health and that if they would send their child to their doctor, that for a nominal sum he could be immunized against diphtheria. In each of the villages mentioned there was a good response, and quite a number of the children went to their family physicians and were immunized. It is hoped that a little later when a sufficient number of Health Centres can be established in our county, with an adequate nursing service, that a real intensive warfare can be started against diphtheria and that we may be able to eradicate this dread disease in our territory. However, it is realized that this can only be accomplished through the aid of the medical profession, all health agencies, and an educated public.

CONCLUSIONS

In conclusion, it would seem to be established that vaccination against diphtheria with toxin-antitoxin is more effective than anti-typhoid vaccination and probably equally as effective as smallpox vaccination. In addition, it would appear that if we wish to have an actively immune population of children, we can accomplish it by using the toxin-antitoxin injections. Certainly, the fact that morbidity and mortality

rates from diphtheria have remained almost the same for the past ten years, would prove that some new weapon must be employed in the fight

against the most mortal enemy of childhood, the treacherous deadly disease,—Diphtheria.

301 OLD COURT HOUSE.

Sterilization of the Mentally Unfit*

E. J. EMERICK, M.D., Columbus
Superintendent of the Institution for Feeble-Minded

Editor's Note.—Sterilization of the mentally unfit is a problem today because feeble-minded women can have a dozen feeble-minded babies and then society insists upon them all being raised. However if they were let alone, the majority of them would not survive the first few months of life. In the opinion of Dr. Emerick it is a disgrace to the nation that there are thousands of defective children annually born to imbecile parents, when the problem could be controlled in an ideal way by segregation. While sterilization may be of benefit to the feeble-minded individual in one way, it may also make the individual a prolific source for the spread of venereal diseases. Until the public at large has been properly educated regarding sterilization, it is hopeless to expect the courts of law or public opinion to uphold it, and in the meantime segregation must be used to accomplish the same ends.

FOR A NUMBER of years, there has been considerable agitation *pro and con* on the subject of sterilization. In fact, about every legislature for the last six or eight years has had a sterilization bill up, but so far, it has always been defeated. Personally, I have, heretofore, opposed a bill of this kind. I have always felt that it was too far in advance of public sentiment and that it would not reach the class of individuals that needed it most. However, now and then, I come across isolated cases where I feel that if we could sterilize them, it might be of benefit to society.

There is no use getting excited or hysterical about this matter. We have always had the mentally defective with us and we always will have. I am not a believer, however, that what always has been, must be. On the other hand, I am determined not to be as pessimistic about the matter as some of our worthy brethren are inclined to be.

THE SURVIVAL OF THE UNFIT

Whether the feeble-minded or the mentally defective are increasing so enormously, as some would lead us to believe, is a question. We have no facts to prove that they are; although personally, I am inclined to believe that they may be gaining ground, as we are doing everything in our power to interfere with the law of the survival of the fittest.

We are sending our health officers into the slums and insisting on better sanitary conditions, purer and better food. We are sending our district nurses out into the slums to nurse these feeble-minded babies. We are establishing fresh air baby camps, where, undoubtedly, quite a number of feeble-minded babies are raised. These babies are saved, when otherwise they would have been lost. *Consequently, we are raising today a greater proportion of feeble-minded babies than*

ever before. Feeble-minded women can have a dozen feeble-minded babies and we insist upon them all being raised, while if they were let alone, the majority of them would not survive the first few months of life.

I do not wish you to understand that I am uttering one word in disparagement of this great and noble work, for as soon as a baby is born into this world, he is entitled to the best care and treatment that we can give him, whether he be feeble-minded or not, but we should see to it, that there are not so many feeble-minded babies born. *It is a disgrace to the nation that there are thousands of defective children annually born to imbecile parents. The most ideal remedy is segregation.* The facts are that the brighter and most harmful type, the ones who are the greatest disseminators of venereal diseases and the most prolific can be made self-sustaining under guidance. The main trouble with many of these is that they have been born and raised in bad environment. The morons or brighter type of the feeble-minded, if placed in proper environment are not such a troublesome problem. For instance, four or five years ago, we opened a building for defective delinquent girls. This building accommodates 100 of these girls. These defective delinquents are of the brighter or moron type. Their chief occupation before coming here was running the streets and soliciting business and going with any strange man whom they could pick up. In fact, every girl in this building had been grossly unmoral. We now have some 50 girls out on trial from this cottage, who are going straight and making good. They never would have gotten into trouble had they been in the proper environment.

STERILIZATION LAWS IN VARIOUS STATES

There are fifteen states in the union that have or have had some sort of a sterilization law. They are, Connecticut, California, Indiana, Iowa, Kansas, Michigan, Nevada, Nebraska, New York, New Jersey, New Hampshire, North Dakota, South Dakota, Washington and Wisconsin.

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I have written to all of these states and secured copies of the laws from most of them. I have also gotten the opinions of a number of the most prominent men in the country who are interested in the care and treatment of the mentally defective. I wish to read you abstracts from their letters, as I have received permission to do so.

CALIFORNIA

California is probably performing more operations for sterilization at the present time than any other state in the union. Most of this work has been done in California since 1918; although the law was passed in 1909. I find that Dr. F. O. Butler, Superintendent of the Sonoma State Home, Eldridge, Cal., is the most enthusiastic supporter of sterilization of anyone connected with the work, with whom I have been able to get in touch. He states the following: "We have been doing this work for several years but only to any great extent since 1918, having performed 298 operations in this institution up to date. This included both male and female. The hospitals for the insane, the majority, at least, are carrying on this work. I believe that I can conscientiously say that it is the opinion of everyone in this state who has anything to do with the feeble-minded and insane, that this operation is of great benefit to this class of patients, and I know it is the proper thing to prevent propagation. I would not for anything in the world have anything come up that would interfere with or prevent us from operating on the mentally deficient cases. The only regrets I have to make are that we cannot operate, on all whom we should; that is, there are so many outside of the institutions who are reproducing defective offsprings that I personally feel that if there is any way possible that they should be operated on to prevent this that it should be done. We are admitting many cases in this institution simply for the purpose of sterilization and allowing them to return to those that are personally responsible for them. Others we are operating on and allowing them to go out and make their way in the world under our supervision. This, we find, is quite satisfactory, thereby making more room in the institution for those who are not able to cope with outside conditions. I understand that in seven of our states the sterilization law has been declared unconstitutional, but my sincere hope is that the law in this state will always be upheld and nothing arise that will interfere with this extremely important work."

INDIANA

They have done quite a few operations in Indiana but since so many states have declared the sterilization laws unconstitutional, they have been afraid of the law and hope to have it amended, so that it will stand. However, they do not seem to be as enthusiastic in this state as to the law as they were at first.

MICHIGAN

Michigan in 1913 passed a sterilization law, which has been declared by the Supreme Court to be unconstitutional. Dr. H. A. Haynes, Superintendent of the Home and Training School for Feeble-Minded at Lapeer, Mich., writes as follows: "*From the many surveys that have been made from the results obtained following mental examination of our army, I believe that the problem of framing a sterilization law that meets all conditions is more difficult than was anticipated a few years ago.*" He also states—"I am still undecided upon the subject and until every other means of caring for the problem fails, I do not think we should resort to surgical methods."

NEBRASKA AND ITS PRACTICAL LAW

Nebraska has a law authorizing the sterilization of the feeble-minded or insane inmates of institutions. This law seems to me one of the most practical laws that I received and I want to quote two sections from it. *Section 3.* Examine all inmates. It shall be the duty of the examiners to examine into the innate traits, the mental and physical condition, the personal records and the family traits and histories of all inmates who may be subject to parole or discharge from the institution for feeble-minded, hospitals for the insane, the penitentiary, reformatory, industrial schools, industrial home or other such state institutions, and if after a careful examination and investigation, such board of examiners find that such inmate is feeble-minded or insane, that such inmate is capable of bearing or begetting offspring; that children born or begotten by such inmate would inherit a tendency to feeble-mindedness, insanity or degeneracy, that such children will probably become a social menace and that procreation by such inmate would be harmful to society, and that such inmate should not be paroled or discharged, as the case may be, unless sterilized, then in every such case, it shall be a condition, prerequisite to the parole or discharge of such inmate, that said inmate be made sterile, and that such operation be performed for the prevention of procreation, as in the judgment of said Board of Examiners shall be most appropriate to each individual case.

Section 4. Operation explained to family.—"Before any such operation shall be performed, the nature, character, and consequences of such operation shall be fully explained to such inmate and to the husband, wife, parent, guardian or nearest kin of such inmate and no such operation shall be performed without the written consent of such husband, wife, parent, guardian, or nearest kin, as the case may be and the consent of such inmate so far as said inmate is capable of assenting thereto."

It seems this law gives the patient and the friends the choice of the patient remaining in the institution indefinitely or of being sterilized in

every case where procreation would be undesirable.

Dr. H. J. Stewart, Superintendent of the Institution for Feeble-Minded in Nebraska in his letter makes the following statement: "Would say that it is in my opinion, one of the most logical solutions of the mentally defective problem. It is at the present time operative and while it is not in such a condition that we can sterilize all mental defectives, we do sterilize a considerable per cent. who are discharged or paroled from our state institutions." Dr. Stewart did not state how many operations they had performed.

IOWA

Dr. George Mogridge writes me that they have had three sterilization laws passed at different times in Iowa but none of them have been workable. He states in his letter: "This is the third law that has been passed by different legislatures, none of which have been of a practical nature or workable. I might say that I am utterly opposed to such a law. I have never seen the use of it and think it is an entirely unwarranted procedure. There is very little sentiment in favor of it, in our state so far as I know."

KANSAS

They are not doing anything with the sterilization of the mentally defective in the State of Kansas, as they have a feeling that their law might be declared unconstitutional.

NEW JERSEY

The law in New Jersey has been declared unconstitutional.

Prof. E. R. Johnstone, Director of the Vineland Training School, Vineland, N. J., in his letter states, "My opinion about sterilization has been a rather uncertain one for sometime past, because I have wondered whether we are not going to get all of the facts in the case from Wisconsin; I have held my judgment awaiting strictly scientific findings. * * *

"I have had a feeling that it is important to sterilize every known case of mental deficiency that is of high enough grade to be in danger of propagating its kind. These people are much happier without family cares and I believe a fairly large percentage could be outside of institutions, particularly after having had some preliminary training, if they are sterilized. * * *

"The criticism that a sterilized girl would be in danger of being a center of vice can be avoided by not letting it be known that she is sterilized. As a matter of fact, with most of these cases, they are likely to be a center of vice sterilized as well as unsterilized."

NEW YORK

Their law in New York has been repealed. Dr. Bernstein, Superintendent of the Institution for Feeble-Minded at Rome, N. Y., who is a recog-

nized authority on the subject of the mentally defective, gives his views on sterilization as follows: "It seems that little or nothing is to be gained towards the control or extermination of the defective classes through the application of this measure, as it is apparently legislation in advance of public enlightenment, if not contrary to public opinion; and too, were it applied and the cases turned loose in the community, no doubt, the increase, spread and ravages of venereal diseases would cause such increase in both physical and mental degeneracy that the number of defectives and dependents thus created would more than offset any diminution in the number of defectives and dependents to be hoped for as the result of sterilization, and as a moral issue, society can never afford to stultify itself to the extent of endeavoring to diminish the cost of care and treatment of the defective classes through an act of human mutilation and then set such human wreckage adrift a prey of or a danger to his brother man."

NEW HAMPSHIRE

New Hampshire has a law which seems to be operative. The law in New Hampshire is very similar to the law in Nebraska, as it takes into consideration the personal rights of the patient. Before an operation can be performed they must have the consent of the nearest relative or guardian, as well as the patient, in case the patient is competent to give his or her consent. Dr. Baker, superintendent of the Institution for Feeble-Minded in New Hampshire, writes that he is very much in favor of sterilization although so far, it has only been performed on 8 cases.

NORTH DAKOTA

North Dakota has not done very much with its law.

Dr. Wylie, Superintendent, of the North Dakota Institution for Feeble-Minded, wrote me that he had been inclined to go rather slowly in the matter until the people become educated to the idea of sterilization; also on account of the legal difficulties that have arisen in some of the states concerning it.

SOUTH DAKOTA

They have not as yet done anything with their sterilization law in South Dakota.

Dr. Kutnewsky, Superintendent, of the Institution for Feeble-Minded in South Dakota, writes as follows: "Personally, I do not think very much of it and up to date have done nothing in the way of sterilization." However, he says he expects to try it out soon.

ILLINOIS

Dr. Caldwell, Superintendent of the Institution for Feeble-Minded in Illinois, does not seem to be very enthusiastic about a sterilization law. He states in his letter: "My personal opinion

is that this subject is loaded with a good many question marks when it comes right down to the advisability of using it as a general proposition covered by the law. The great trouble is that the mischief makers are often those mentally deficient people who are at large, and who are not very accessible for the operation of the provisions of any law on sterilization. I believe that the public will have to be educated more and more as to its value before it can become a useful and customary procedure."

PENNSYLVANIA

Dr. Martin Barr, Medical Director of the Elwyn Training School of Pennsylvania, is very much in favor of the operation; although Pennsylvania has no law for sterilization. I will say that Dr. Barr is not only considered a high authority nationally but internationally.

Dr. Murdoch, Superintendent of the State School for Feeble-Minded at Polk, Pa., whose opinion I regard equally as high as Dr. Barr's, writes me that he has never been enthusiastic on the subject; although he states that he would not oppose a law which would give authority to the Superintendent or Medical Staff of Hospitals for the Insane and Institutions for the Feeble-Minded to perform a suitable sterilization operation in properly selected cases.

MASSACHUSETTS

Dr. Wallace, Superintendent of the State School for Feeble-Minded at Wrentham, Mass., writes me that there is such a difference of opinion on this question that he is more or less undecided in his own mind. However, he believes that a law operated with great discretion under a wise commission might do quite a great deal towards benefiting the human race.

I wish to quote from a letter received from Dr. Walter E. Fernald, Superintendent of the Massachusetts School for Feeble-Minded at Waverly, Mass. Dr. Fernald is one of the older men in the work and a man whose opinion is held in very high esteem by all. In fact, I know of no man whose opinion I regard more highly. He makes the following statements: "I have to say that, to me, the theoretical advantages of sterilization disappear on a little closer study of the subject. In the first place, in a free country, where the rights of the individual are never forgotten, such legislation would be passed with great difficulty. For one thing, the Catholic Church thoroughly disapproves of the whole principle, and to many other persons, the idea of de-sexing a woman or a man, is fundamentally repugnant * * *.

"It might be easy to apply sterilization to the lowest grade idiot, but the lowest grade idiot is not the one who is dangerous from a eugenic standpoint. The border-line defective is the one who is the most dangerous from a sex standpoint, and it is the writer's opinion that public sentiment

will never approve of sex mutilations of individuals otherwise presentable * * *.

"The proper argument against sterilization, however, is the fact that sterilized men and women would be the most dangerous members of the community for these persons with sex passions and sex capacity, known to be sterile, would be exploited sexually in such a way as to be of enormous moral damage to the community, besides becoming inevitable foci of syphilis and gonorrhea. In other words, the community and individuals in the community, would have no interest to prevent promiscuous sex relations of sterile men and women. In the personal experience of the writer, this has been illustrated to a remarkable extent, in several cases. One girl who was known to be sterilized, was a source of wholesale infection of venereal disease in the small village where she lived. Her mother knew her to be sterile, and wearily gave up all attempt to prevent wholesale sex relations * * *.

"A man known to be sterile became a source of inexplicable immorality, because he was known to be sterile and therefore, safe * * *.

"The writer feels that the principle of sterilization is a cowardly attempt to evade our responsibility for protection and guardianship, in or out of an institution, of those men and women who are not fully responsible."

SEGREGATION VS. STERILIZATION

Segregation is the most ideal method of preventing the multiplication of the unfit, and, in fact, it is the least expensive way of handling the problem. Sterilization does not interfere in the least in their spreading of venereal disease or their committing of crimes and the majority of these people can be cared for much cheaper in an institution properly adapted for their care and training than on the outside.

I would not be at all in favor of an institution, the main object of which would be to admit the mentally defective just long enough to sterilize them and turn them adrift.

Some years ago the Juvenile Protective Association of Cincinnati estimated that the trials and commitments of Cincinnati's feeble-minded delinquents alone cost the city and state over \$2,597,468 a year. If their estimate was four times too high, these feeble-minded delinquents could have been cared for at much less expense in an institution. The facts are that the moron or brighter type of the feeble-minded can be made self-sustaining in an institution.

However, as I said in the beginning, I feel that there are certain isolated cases that might be benefitted by sterilization. For instance, a girl, who has a bad family heredity, who has been in an institution for several years and taught to be self-sustaining and law-abiding might be discharged and encouraged to marry if sterilized. A few of these people would get along very well in homes of their own, if they

did not have the burden of a family of defective children to raise.

It seems that the majority of the older men in the work, those who have had the most experience in dealing with the mentally defective are opposed to sterilization laws.

CONCLUSION

In conclusion I will say that, personally, I am convinced that there are certain isolated cases of the mentally unfit, where it would be of great benefit if we could sterilize them; that is to say, those who are morally inclined and wish to marry

but whose mental condition and history are such that their offspring would be undesirable. If these cases could be sterilized and permitted to marry, they would be happy and get along all right and not be a menace to society, but I am unalterably opposed to any law, which does not take into consideration the rights of the patient and relatives.

Furthermore, any sterilization law should be carefully framed, so that the evil results would not over balance the good done from sterilizing the isolated few.

The Use of Luminal in Epilepsy*

MARY L. AUSTIN, M.D., Gallipolis

Editor's Note.—Luminal is a comparatively new remedy. The question of its efficacy over long periods, without harmful results and whether or not it can be safely withdrawn after a prolonged suspension of seizures, are the necessary facts to be determined by actual experience before its final value in epilepsy can be established. After a limited experience with luminal Dr. Austin is of the opinion that it will arrest the frequency and furor of seizures in some patients but only ameliorate the condition of others. No pleasurable nor disagreeable sensations are associated with the use of luminal; it causes no feto of breath, nor mental torpor, nor skin eruptions. Some patients react favorably to small doses while in others luminal has to be pushed to the point of tolerance to control symptoms. While elimination should accompany the use of luminal, Dr. Austin has noted no cumulative effects of the drug. Status epilepticus has followed in only one case. In one group of 15 patients at Gallipolis, using luminal, the percentage of seizures for one year has been decreased over 42 per cent. In another group of 8 patients, during 8 months, the percentage of seizures has been decreased 60 per cent.

IT IS not our purpose to come before you with a discussion of the etiology or pathology of epilepsies or epilepsy; nor to discuss whether epilepsy is a clinical entity, or that its manifestations are a syndrome; nor by reason of presenting our subject would we wish to dissuade anyone from any scientific effort that would enable one to treat epilepsy in a *rational* rather than an *empirical* manner. Rather, we urge the most intensive effort for the relief of this malady and the prevention of its wider prevalence in future generations.

In the meantime you are frequently called on to ameliorate suffering in epileptics, and it is for this purpose, that we wish to present our experience to those of the medical profession, who have not opportunity to observe the effects of the administration of luminal to a large number of epileptics over a considerable period of time and under favorable conditions, that you may avoid some needless experimentation, some failures, and have a greater confidence in its potency than you have had with the other palliative remedies at your command, should you conclude to use it.

EVALUATING LUMINAL

Luminal is a comparatively new remedy, and its efficacy over long periods without harmful result and whether or not it can be safely with-

drawn after a prolonged suspension of seizures, are the necessary facts to be determined by actual experience before its final value in epilepsy is established.

Current medical literature informs us that luminal was manufactured in Germany in 1911; given to the medical profession in 1912, and used extensively in Germany in the treatment of epilepsy and allied nervous diseases, before and during the World War. It was later introduced into the United States and Dr. Grinker of the Northwestern Medical School of Chicago, and Dr. Dercum of the Jefferson Medical College of Philadelphia, have given to us the first reports of its successful use in cases of essential epilepsy.

Not much of the pharmacology of luminal is available. Luminal is phenylethylmalonylurea and is closely related to veronal. Its dosage ranges from $\frac{1}{4}$ gr. to 10 gr. (0.05 gm. to 0.6 gm.) and it is administered by mouth, or rectally in enema or suppository, also subcutaneously as sodium luminal in 5 to 10 grains. Its action is said to be sedative and anti-spasmodic but we find nothing telling how it produces these effects, nor how it effects either the nervous system or circulation. It is reported to be free of renal irritation and to be well tolerated by the stomach.

USE OF LUMINAL AT THE OHIO HOSPITAL FOR EPILEPTICS

Our first experience with luminal at the Ohio Hospital for Epileptics was in May, 1919, when

*Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4-6, 1921.

a patient under the direction of Dr. Dercum of Philadelphia began taking 1 gr. doses, daily. While records show that he escaped an epileptic seizure, for longer than one month intervals, only four times in eleven months, there were fewer seizures, his sense of well-being and memory were so improved, with no apparent deleterious effects, that it was regarded as decidedly superior to previous treatment. In October of the same year, a patient was selected who had been a high-type epileptic, with quite normal reasoning power, but in whom, serial seizures, over a period of two years, had resulted in such mental enfeeblement that she was able to comprehend only simple statements. Bromides increased her mental torpor and only afforded a partial relief from seizures. After the daily administration of $1\frac{1}{2}$ grs. luminal, at bed time, the seizures were reduced. At the end of three months, she averaged 5 seizures per month and much of the mental torpor had disappeared. There was a renewed interest in her associates and work, and she was executing a task in a manner beyond criticism. There were no pernicious after effects. Circumstances prevented the continuation of luminal and she has continued at the rate of from one to seven seizures per month, with an occasional interval, of one month without a seizure. Mental state continues to show some improvement.

RESULTS IN FORTY-NINE SELECTED CASES

On January 16, 1920, twenty-two cases of essential epilepsy were selected for the administration of luminal. Several of them were high type epileptics, who with a suspension of seizures, could resume their former occupations. Some showed mental irritability and ego, others were morons and imbeciles plus epilepsy. The various types of seizures were represented. A general physical examination of each was made, including weights and urine analyses. A system of diet, hygiene and exercise was inaugurated and each patient placed on his honor to carry it out report daily. From the diet red meats, tea and coffee were omitted. A daily sponge or tub bath was taken. Daily bowel elimination was insisted upon, laxatives, saline cathartics, and enemata were used as needed. A walk of two miles in addition to the usual activities of the day was required.

Luminal has been used in this group for fifteen months with daily doses of one to five grains at bed time. Some patients, for various reasons, have not continued throughout, and have been replaced by others. Some others have been added, so that in all, there has been a total of 49 cases regularly on luminal treatment for varying lengths of time. In addition it has been used very successfully in status epilepticus and mania.

In these latter conditions it has been used subcutaneously in from $1\frac{1}{2}$ to 5 grs. (0.1 gm. to 0.3 gm.) or per rectum 5 to 10 grains. (0.3 gm. to 0.6 gm.) The following reports show results:

Case 1.—H. S., female, aged 34 years, factory worker. Onset of seizures at age of 14 years. Diagnosis: Grand mal epilepsy. Seizures occurring in groups, of one month or six weeks intervals in which, dislocation of shoulder was a frequent occurrence. Seizures were followed by periods of mental depression in which patient entertained suicidal ideas. In 1919 she had twenty-two seizures. Taking $1\frac{1}{2}$ grs. (0.1 gm.) of luminal daily for one year, she has had neither a major or petit mal seizure, no dislocation, is in optimistic mental state, does not have fits of depression, and would leave the hospital but for her desire to be further benefited.

Case 2.—P. E., female, age 35 years, housekeeper. Onset of seizures at 11 years of age. Diagnosis: Hereditary, grand mal epilepsy. Onset of seizures were of petit mal type, and continued as such until 19 years of age, when grand mal seizures began. Veronal afforded some relief from the frequency of minor seizures. In 1919 she had 75 major seizures and numbers of unrecorded petit mal. During 1920 on daily administration of $1\frac{1}{2}$ grs. (0.1 gm.) luminal, she has had 3 major seizures, 1 in June, 1 each in November and December, no minor seizures. Mental faculties are more acute, memory greatly improved, no longer morose, does not pass albuminous urine and has increased in weight from 106 to 126 pounds. We might add, that at the time of the June and November seizures, she was off of luminal for a few days.

Case 3.—M. E., female, aged 31 years; musician. Onset of seizures at 13 years of age. Diagnosis: Grand mal epilepsy. Slight temperamental changes with some inertia apparent. Seizures occurred in groups at intervals of one to three months. In 1919, she had 23 major seizures, and with luminal daily in $1\frac{1}{2}$ gr. (0.1 gm.) dosage, she has had one major seizure and no petit mal in 15 months. Mental state is better than we have ever known it to be. She eats and sleeps well, has no albuminuria and has gained in weight.

Case 4.—M. L., female, age 21 years. Onset of seizures at age of 6 years. Mental state good, no impairment of memory. Seizures occurred at intervals of 1 month to 6 weeks; had 13 seizures during 1919. Since January 16, 1920, with $1\frac{1}{2}$ gr. (0.1 gm.) of luminal daily, she has had one major seizure in July, one in October and five petit mal seizures in which loss of consciousness was not complete. Intellectual processes are keener, good appetite, no insomnia, has not lost weight and has no albuminuria.

Case 5.—G. G., female, age 31 years of age; domestic. Onset of seizures at age of 17 years. Diagnosis: Grand mal epilepsy. Seizures occurred at irregular intervals and numbered 7 during 1919. During daily administration of $1\frac{1}{2}$ gr. luminal (0.1 gm.) since March 26, 1920, she has gone one year without a seizure of any kind. General condition good, no pernicious after effects.

Case 6.—G. A., aged 14 years. Onset at 9 years of age. Diagnosis: Grand mal epilepsy. Seizures occurred at irregular intervals and numbered 31 in 1919. Treatment instituted January 16, 1920, of 1 gr. luminal daily, resulted in a suspension of seizures until December, 1920. Since then she has had 3 major and 18 petit mal seizures. Believing that her tolerance had not been reached, she was given a larger dosage, and seizures are less frequent. Mental state improved; no albuminuria.

Case 7.—J. E., female, 12 years of age. Onset during infancy (birth injury) feeble-minded. Had 83 seizures during 1919. Luminal gr. 1 daily was given for 4 months. There was a suspension of seizures for 1 year. Since, she has had 1 major and a few minor seizures and the treatment has been renewed. There has been marked mental development, physical condition good, no albuminuria.

Case 8.—A. E., male, age 55 years, laborer. Seizures for 7 months previous to administration of luminal numbered 11. In seven months with $1\frac{1}{2}$ gr. dosage, he has had no seizure, is in better mental and physical state than he has been for 10 years.

Case 9.—G. M., female, age 30 years. During 1919 had 56 major and countless minor seizures. In 15 months with $1\frac{1}{2}$ to 2 gr. of luminal daily, she has had 16 major seizures and many minor ones. Mental condition unchanged, but she is more cheerful and grateful for a reduction in frequency in both types of seizures. This case is used to illustrate the fact that there are some cases apparently not greatly benefited, some of which we have reason to believe may be due to fault of administration.

DISCUSSION OF RESULTS

In some the character of major seizures has been replaced by an atypical one, in which there is no tonic or clonic convulsion, but a furor of considerable violence, of irregular body movements, with loss or partial loss of consciousness. In others major seizures are controlled or replaced with minor ones in which loss of consciousness is sometimes incomplete. But we have reason to believe that failure in some of these cases lies in not pushing the dosage to a point which will control and later adjust the dosage to the need of the case. In the meantime it is most necessary for the safety of the patient that the bowels, skin and kidneys are functioning.

We are not optimistic to the point of heralding luminal as a specific in epilepsy. As a matter of fact we can not believe that it is. But it will ameliorate many cases, and to date has given better results by far in essential epilepsies that any remedy so far used.

Those who have been on luminal treatment are in as good physical and mental state as at the beginning of the treatment and many much improved. So far no pernicious results are recognized. Unless there is some contra-indication

we will push it to the point of control or tolerance, but with the patient always under close observation.

SUMMARY

1. There is no doubt but that luminal will arrest the frequency and furor of seizures.

2. There are some cases that at best luminal will only ameliorate.

3. There are no pleasurable nor disagreeable sensations associated with the use of luminal.

4. Luminal causes no feter of breath, nor mental torpor, and no eruptions have followed its use in any case.

5. The possibilities are that luminal may need to be used continuously to control seizures.

6. In some patients $1\frac{1}{2}$ gr. dosage at bedtime has caused a suspension of seizures. In other patients the luminal has had to be pushed to the point of control, or tolerance, if, in the meantime, no outward symptoms occur.

7. An examination of patients taking luminal during a 15 months' period showed no evidence of renal irritation.

8. While using luminal, elimination by bowels, skin and kidney is urged, although no cumulative effects of the drug have been observed.

9. Only one case has been recorded in which prolonged arrest of seizures has terminated in a status epilepticus.

10. In one group of 15 patients using luminal, we find the percentage of seizures for 1 year has been decreased $42\frac{1}{2}$ per cent. In another group of 8 patients during 8 months, the percentage of seizures has been decreased 60 per cent.

Distribution of Vitamins.—Our knowledge of the accessory food factors, commonly spoken of as vitamins, is so recent, and the exact nature of these factors so enveloped in mystery, that it was inevitable that the public's lack of knowledge on the subject should be capitalized. It, therefore, is not surprising that there are on the market a number of "patent medicines" that are sold under the claim that they are rich in vitamins—although their exploiters fail to explain which, if any, of the three food factors their products contain. The renaissance of yeast as a therapeutic agent has given an opportunity to the manufacturers of this product of unduly stressing the fact that yeast is rich in antineuritic vitamin (water soluble B). Because milk and certain milk products are rich in the fat soluble A factor, the dairy interests would apparently have the public believe that this particular vitamin is to be obtained only from their products. The truth is, that the accessory food factors are so well distributed throughout the dietary of modern man that, generally speaking, the individual who uses ordinary judgment in selecting his food is in no danger of suffering from a deficiency of any of these three factors.—(*Jour. A. M. A.*, Aug. 13, 1921, p. 561.)

Hyperplastic Sphenoiditis*

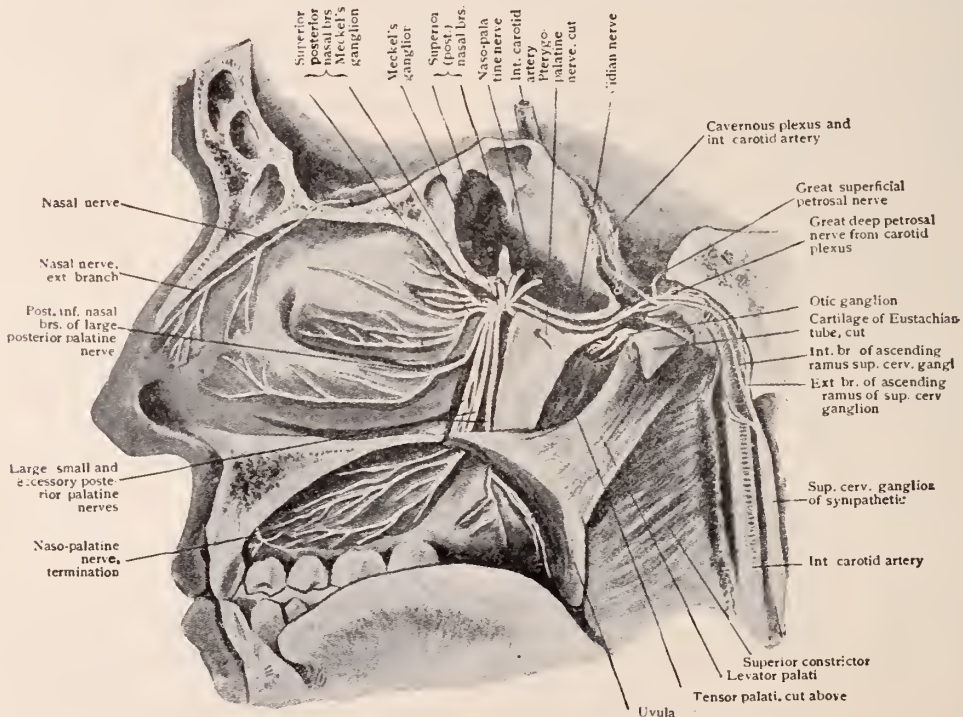
C. H. HAY, M. D., Cleveland

Editor's Note.—The sphenoid sinus is in anatomical relation to so many important nerve trunks and other structures and the permeability of its walls is so great it is not surprising that such intensive symptoms should be produced by hyperplastic changes, especially when accompanied by infection. Sluder was the first to recognize hyperplastic sphenoiditis and Dr. Hay details the information he secured regarding this condition while studying under and working with Sluder in his St. Louis clinic. The characteristics and symptomatology of sphenoiditis are sufficiently unique to make diagnosis easy provided the specialist will keep the condition in mind and look for it. While medical treatment is of avail in a limited number of cases, surgical interference must be resorted to in a great number of cases to secure permanent relief and the operation devised by Sluder and described by Dr. Hay is very effective.

HYPERPLASTIC changes in the sphenoid region were first mentioned by Dr. Greenfield Sluder in 1915. These changes are of great importance and give great discomfort to the patient because of their association with the many nerve trunks in the region of the sphenoid bone. Familiarity with the anatomy of this region is necessary for the purpose of understanding the symptoms produced by these changes.

project externally and above the sphenoid cell and nearly enclose the sphenoid cell, or these cells may equally share the space and cause a chain of symptoms described in this article regardless of its being the sphenoid or ethmoid cell.

Above and laterally to the sphenoid sinus is the cavernous sinus. Within the cavernous sinus are the internal carotid artery, and the third, fourth, and sixth cranial nerves, with the first division of the fifth lying in the lower part of its



Dissection showing sphenopalatine and otic ganglia viewed from within.

Fig. I. With permission from Piersol's anatomy. Showing the anatomy of the nervous system of the nose.

ANATOMICAL CONSIDERATIONS

The sphenoid bone is hollowed out by the sphenoid cell, which varies in size to a mere rudimentary, and occupies space in the lower anterior part of the bone; and the rest of the bone may be occupied by the ethmoid cell, which may

lateral wall. The second division of the fifth is in close association with it and the third division of the fifth is sometimes in close association with it. See Fig. II. It is the size of the cavernous sinus more than the size of the sphenoid sinus which determines the relations of these nerve trunks to the sphenoid sinus.

If the cavernous sinus is large in length and cross-section these nerves will be farther re-

*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4-6, 1921.

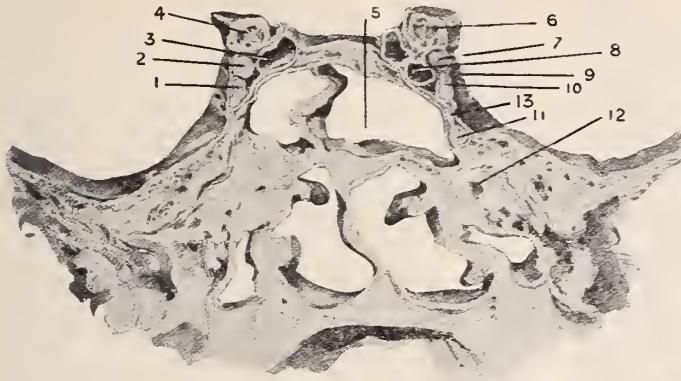


Fig. II. With permission from Dr. Greenfield Sluder.

A cross section of the sphenoid bone anterior to the optic nerves, showing the close association with the internal carotid artery and the nerves in this location, and the cavernous sinus. 5. Sphenoid sinus. 7. N. oculomotorius. 8. Internal carotid artery. 9. N. trochlearis. 10. N. ophthalmicus. 11. N. maxillaris. 12. N. Vidian. 13. N. abducens.

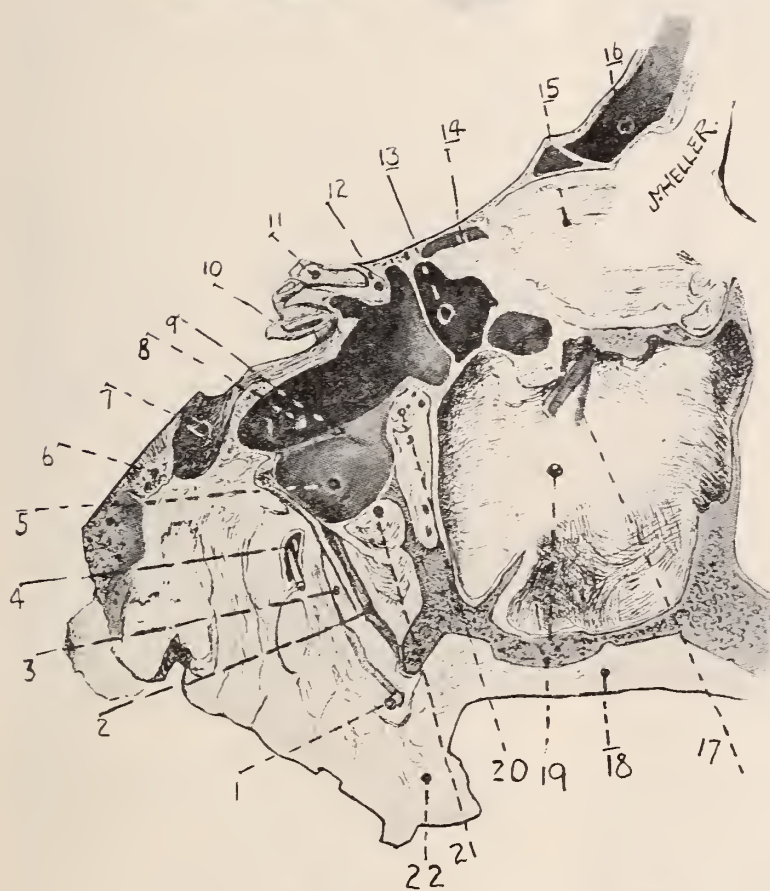


Fig. III. With permission from Dr. Greenfield Sluder.

A sagittal section between foramen rotundum and Vidian canal on right side. In this section the optic canal is two-thirds surrounded by the sphenoidal sinus. Also note the close association of the sphenoid sinus with the eustachian tube, and the tensor palati, and levator palati muscles.

2. Tensor palati muscle. 3. Levator palati muscle. 4. Eustachian tube. 5 and 8. Sphenoid sinus. 6. Groove for carotid artery. 9. Vidian canal. 10. Internal carotid artery. 11. Optic nerve. 13. Posterior ethmoid cell. 14. Superior rectus muscle. 15. Eye. 17. Bristle passed into maxillary antrum. 20. Meckel's ganglion.

moved from contact with the body of the sphenoid bone and the sinus within it. On the other hand if the cavernous sinus is small in length and cross-section, these nerve trunks will be closely associated with the sphenoid and the contained sinus. The optic, maxillary, and Vidian nerves are not under this control. A small sinus, well in the center of the sphenoid bone, will be widely removed from these nerve trunks regardless of the size of the cavernous sinus.

The optic canal and the ophthalmic artery are situated at the upper anterior part of the body of the sphenoid sinus. The inner surface of the optic nerve is always in close association with the sphenoid or ethmoid sinus as the case may be, and in case of prolongation of these cells they

may nearly surround this nerve from below, as in Fig. III. In some skulls where the bones are very small the bony separation may be egg-shell thin or absent altogether.

Should the sphenoid sinus extend into the greater wings of the sphenoid bone the sixth nerve will be closely associated with it in the sphenoid fissure below. Should the sphenoid sinus extend backward to the Clivus of Blumenback the sixth nerve will be closely associated with it as it passes under the dura.

A sphenoid sinus of large extent, extending backward and outward, may approach the third division of the fifth nerve in the foramen ovale. In instances the sphenoid sinus has been seen to extend so far backward that it becomes closely

associated with the semilunar ganglion. In such cases the ganglion is separated from the sphenoid sinus by an egg-shell thickness of bone. This should be kept in mind when making a diagnosis, for in such an association it can be explained why a ganglion neuralgia and a tic-douloureux of sphenoidal origin as an acute or subacute lesion recovers, and at other times requires a ganglion removal. At times the sphenoid lesion can be controlled. When the sphenoid sinus extends so far laterally that it approaches the foramen rotundum, it comes in close association at this point and for some distance posterior to it with the second division of the fifth nerve. The third and fourth nerves are in very close association with the lesser wing of the sphenoid bone or by an extension of an ethmoid cell, thereby bringing these nerves into close association with these cells.

A sinus extending downward will approach the nerve of Vidian, and its bony enclosure may be missing from bone necrosis on its upper surface leaving the nerve exposed. The association of the sphenoid sinus with the eustachean tube varies with the size of the sphenoid sinus. See Fig. III. The sphenoid sinus may extend so far downward that a mere egg-shell thickness of bone will separate them. Such an association precludes the effect an inflammation of the sphenoid sinus will have on the eustachean tube.

PERMEABILITY OF THE WALLS OF THE SPHENOID SINUS

The permeability of the walls of the sphenoid sinus has been demonstrated by applying a saturated solution of cocaine to the inner wall of the sinus. This had a paralyzing effect on the nerves in this region. The entire fifth nerve was paralyzed so that there was no sensation on that side of the face. The effect on the nerve of Vidian caused a low grade deafness from a closure of the eustachean tube. If the permeation of cocaine will cause this paralyzing effect, it can be concluded that the permeation of toxins from coryzas will cause an irritation of the nerves in close association producing neuralgias and loss of function, and close the eustachean tube as long as the sphenoiditis continues. This might explain some fine results in cases of low-grade deafness following operative procedure on the post-ethmoidal sphenoid sinuses. The great superficial petrosal nerve from the ganglion of the seventh is the motor nerve of the levator and tensor palati muscles which when irritated, or paralyzed, are unable to perform their full function so they do not keep the tube properly open. Such cases are usually called chronic catarrhal otitis, when in reality they are deafness from a closure of the eustachean tube from an obstruction, or an irritation of or paralysis of the nerve of Vidian when the etiology is a sphenoiditis.

CHARACTERISTICS OF HYPERPLASTIC SPHENOIDITIS

In hyperplastic sphenoiditis both the hard and soft tissues show a thickening. This thickening

is not uniform. It may be from an infection causing a periostitis, which is followed with a hyperplasia, though no germ has been demonstrated. It may be the result of a chronic irritation from the secretions from the sinuses, pouring over the soft tissues. This secretion is highly irritating, if we take the irritation of the skin about the nares and upper lip, during a coryza, as a criterion.

It is common in both sexes alike. Owing to the thinness of the bones in the female, it may develop faster and be more troublesome to this sex. Age has little influence. I have seen it in children of four where the process was well developed, and I have seen it in a very mild stage in those of seventy. The disease is very common. When one learns to recognize it, it seems that nearly every person is afflicted with it to some degree.

It is always bilateral, though the patient may receive all his discomfort from only one side. It may be either primary or it may be an extension of the hyperplasia backward. The anterior ends of the middle turbinates, and the anterior ethmoids, from their location, first come in contact with all air, dust, and bacteria inhaled. It is here that many cases of hyperplasia are first noticed. This hyperplasia slowly extends backward until the entire turbinates, post-ethmoids, and sphenoids are involved. The connective tissue on the lateral walls of the middle turbinates and ethmoids fits loosely and readily becomes edematous, and coryzas make polyps, which in the earlier history of the case disappear with the subsidence of the acute process; later as the hyperplasia progresses this condition remains.

When the hyperplasia is primary in the sphenoid sinus there may be no changes seen when examining the anterior nares. The degree of hyperplasia involving the plica septi, commonly spoken of as the posterior end of the septum, seems to indicate a corresponding degree in the sphenoid sinus, probably because the secretion from the sphenoid descends over the plica, that of the post-ethmoids passes over the posterior ends of the middle turbinates.

THE ACUTE ATTACK

A patient usually dates the beginning of his trouble to a cold, which might have occurred months or years before, and might have been so mild that it was hardly noticed at the time, or so severe that he never recovered from it. Usually there is a latent period which varies greatly as to length of time, and then with a very slight acute process added to a hyperplastic sphenoiditis the symptoms are all out of proportion to the acute attack. The mucous membrane of the sphenoid sinus becomes inflamed, and thickened, and owing to the lack of drainage, a certain amount of thickening of the tissue follows, which lowers the resistance. It never fully recovers its normal condition.

During the acute attack the amount of se-

cretion varies considerable, both in consistency and quantity. It may be thick purulent, thick mucus, milky white, serous, or a thin transparent viscid liquid. At times it is very annoying to the patient, especially some mornings, when it is so thick and sticky, that it adheres so firmly to the post-pharyngeal wall that the patient is forced to put forth great effort to dislodge it. Then again there might be a mere "dropping" in the throat, or the patient may be free from it entirely.

The headaches may be caused by the inflammatory process extending through the sinus wall, or the toxins permeating the thin bony walls of the sinuses, irritating the adjacent nerve trunks. Another factor is a bone change in the hyperplastic process with or without periostitis. This bone change is not always uniform in distribution. With the use of the Holmes' naso-pharyngoscope, thickened plaques can be seen in various locations within the opening of the sphenoid sinus, on the floor and lateral walls, which are usually bathed in secretion. This bone change may take place around the opening of the sinuses and completely close them. It may take place at the various foramina of the skull and cause pressure on the cranial nerve trunks passing through them. Constant pressure on nerves causes pain. According to the location of these plaques the symptoms may be more or less pernicious and disastrous.

When localized about the optic canal and causing pressure on the optic nerve, vision will be impaired. This process may encroach slowly and take years for the symptoms to be very marked, then again the patient may become rapidly blind with no changes in the disc. There may be an extension through the sinus wall or the toxins may permeate the egg-shell thickness of bone, causing a neuritis of the optic nerve, choked disc, amblyopia, asthenopia, and muscle change.

When located on the lateral wall they may cause maxillary neuralgia, and when on the lower wall of the sinus they may give rise to neuralgia of the nerve of Vidian; causing pain in the zygoma, mastoid, ear, making earache, severest about 5 cm. back of the mastoid, extending along the occiput down the neck, shoulder blade, shoulder, arm, forearm, and hand.

Accompanying the nerve of Vidian are fibers from the sympathetic which pass to the various ganglions of the cervical sympathetic extending as far down as the first dorsal. The first dorsal ganglion of the sympathetic sends nerve fibers to the heart and the last cervical sympathetic ganglion sends fibers to the lungs. This may explain attacks of sphenoiditis simulating angina pectoris as well as asthma, bronchitis; also the harsh, dry cough, so persistent in character. The frequency of the involvement of these nerves may be explained because, the lower part of the sphenoid sinus where these canals are located

that carry these nerve trunks, is most frequently affected. The toxicity of the secretion also plays an additional feature here.

Headaches in the supraorbital and occipital region may be the only symptoms complained of for years. At first they may occur only at the onset of a coryza and disappear at the cessation of the acute attack. They are more severe in the morning and wear off during the day. Later with each coryza the headaches become more severe and last longer, until there is no time when the patient is without them and they are a constant factor in the life of the patient. Failure to be relieved from this suffering, the patient is termed a *migraine* by his physician. It seems that when the barometric pressure is low the pain is more severe.

VARYING SYMPTOMS ACCOMPANYING SPHENOIDITIS

Clinically, inflammations of the sinuses of the nose vary greatly. Each sinus has some semblance of constancy in its behavior, as far as symptoms go, with the exception of the sphenoid. It is no uncommon thing to see a sphenoidal empyema give rise not only to its own characteristic symptoms, but to simulate the pains produced by all the other sinuses. These symptoms when produced by the sphenoid are, however, more apt to be nocturnal than diurnal.

It is not uncommon to see these cases with symptoms identical with that of an acute empyema of the sphenoid sinus with the opening closed, when there is no discharge to be seen, or after an operation when the opening is still open. I have in mind one patient, who comes to me frequently, whose sphenoiditis behaves like a vasomotor rhinitis, or rhinorrhoea. She has severe protracted sneezing accompanied with a nasal congestion and a thin hot secretion so profuse that she must resort to a towel for a handkerchief. Her mucous membrane is very sensitive and the skin over which the secretion passes becomes roughened and irritated from the burning of the secretion and the constant wiping it necessitates. The eye on this side is greatly reddened and bathed in a profuse secretion, the pupil is dilated, giving a staring appearance. There is lacrimation, and extreme discomfort from photophobia even in the dark. Severe headaches, both supra-orbital as well as occipital, develop about six hours after the onset. Herpes about the upper lip and nose appear the second day and remain even after the sphenoiditis subsides. In this case all therapeutic measures have failed when applied peripherally, but applications when applied directly into the sphenoid sinus give almost immediate relief.

It is a firm belief that a large number of headaches of whatever length of time standing, and diagnosed as *migraine*, that are met with in the general practice of medicine, and have always defied any method of treatment, are sphenoidal in origin, or were started as such.

They may have lost all the evidence of the local disease, which could have been readily recognized some months or years before.

METHOD OF DIAGNOSIS

For diagnosis it is very necessary to have the proper illumination. The Welsbach and the Mazda lamps give neither the proper amount nor the right color of light. Owing to the location of the sphenoid sinus it is not satisfactory to depend upon the examination from the anterior nares. A good lamp suited for this purpose is the 'Lilliput arc lamp.' With this lamp a strong beam of white light, nearly the same as day light, can be so focussed in the pharynx, that with the proper reflection, the slightest changes in the color and appearance of the mucous membrane in the post-ethmoidal sphenoid region can be detected.

Dr. Sluder describes the color of the normal mucous membrane as pink and fitting close to the bone. It gives the impression of thin pink, silk velvet. The epithelium is thin and transparent and the membrane is translucent. It is moist, not wet. No blood vessels are seen. The middle turbinate is smooth and pink and the plica septi is only partly developed and is of pearl pink in appearance.

A typical hyperplastic picture shows some increase in redness with more or less thickening of the epithelium as well as the membrane. The epithelium may be thickened and the membrane not thicker than normal or vice versa. The vascularity is increased, manifested by the presence of macroscopical vessels, especially radiating from the spheno-palatine foramen. In addition to this there is another picture which shows the mucous membrane to be red and there is some thickening of the membrane. There are no blood vessels seen and this tissue can be shrunk with adrenaline. This lesion is not to be confounded with a hyperplasia. It is necessary to thoroughly familiarize ourselves with the slightest changes in the color, thickness, roughness, vascularity, and translucency of the mucous membrane in order to make a correct diagnosis.

It is not uncommon to find no secretion of any kind and the membrane dry, even when opening the sinus. During an acute attack the secretion may be profuse, and vary greatly in character, as stated above, but we may not see the patient at this time. Then again the patient may have an acute attack and the secretion will only moisten the adjacent tissues and can only be seen with the use of a pharyngoscope.

MEDICAL TREATMENT

The treatment is both medical and surgical. It has been my experience that we do not see these patients early enough to give them much benefit with medical treatment. By the time they come to us their process is so far advanced

that their symptoms and their headaches make them so uncomfortable, that any form of medication is a mere waste of time. Again medical treatment will ameliorate the symptoms for a short time, when an acute attack added to their condition makes them more uncomfortable than before.

With the low grade post-ethmoidal sphenoiditis, if for headaches or eye lesions, much can be accomplished with a constant use of a nasal douche several times daily. This consists of

Sodium chloride	
Sodium bicarbonatis aa	4.00 gm
Saccharum lactis	12.0 gm
Aquae dest qs	100.0 cc

This is very soothing and through its osmotic action it greatly reduces the congestion of the tissues. It seems after the patient eats he has more secretion, and a cleansing of the nose at this time is of greater comfort.

A solution of 0.5 per cent. phenol in liquid alboline is applied with a 5cc. syringe, with the tip placed just under the posterior end of the middle turbinate. This is injected with some force so it will enter the sinuses. This is done daily during the acute attack.

A solution of 2 per cent. silver nitrate, occasionally applied to the middle meatus, is very helpful.

I am doubtful if the suction treatment can be of any help, for these cases are not suppurative, and in some there is no secretion. When the secretion is very thin and scanty it cannot be drawn out of the opening.

A word as to a change of climate. A high barometric pressure does give relief to many of the early cases. It is not recognized as being beneficial for or against a developing hyperplastic sphenoiditis.

Should these measures fail the sinuses should be opened.

SURGICAL TREATMENT

I employ Dr. Sluder's technique for the operation and with me it is the operation of choice.

Nerve trunk anesthesia is accomplished by applying one drop of a saturated solution of cocaine over the nasal ganglion behind the posterior tip of the middle turbinate, leaving it there five minutes, then it is moved a little backward and upward to a point over the nerve trunk. The anterior nasal nerve is cocaineized by applying a drop of saturated solution along the anterior boundary of the nose as high as it will go and leaving it in place five minutes. Anesthesia is now complete for any operation on this side of the nose.

A Sluder middle turbinate knife, with cutting edge downward, is carried high up into the nose, internal to the middle turbinate. This is rotated outward, the blade being forced through the thin turbinate bone, and drawn forward and downward severing the anterior three-fourths of the

middle turbinate, about 1 mm. from the cribiform plate. This is done with several short incisions instead of one long one. This detached mass is pushed downward into the nose and removed with a snare, the posterior end of the middle turbinate being left in position. The Sluder sphenoid knife is now introduced, cutting edge downward. Its smooth surface is passed gently over the cribiform plate until it meets the anterior face of the sphenoid or ethmoid, as the case may be. With gentle pressure the knife is pushed through the wall. One incision is made in the wall downward with an angle slightly toward the septum, until it reaches the floor of the sinus. Another about thirty degrees outward until we have a cut like an inverted letter V. Now with a heavy, extra long forceps this piece is removed to the floor. When the anterior wall is very much thickened from the hyperplastic process it might be well to remove a part of the floor. This will make the drainage better and the opening is not as apt to close. In cases of eye lesions from the extension of the process into the orbit, the wall of the orbit can be opened at this time, and drained through the nose.

PROGNOSIS

If the headaches and eye symptoms are caused from the inflammatory process extending through the sinus wall, or the toxins permeating the thin bony walls, the patient will be relieved in a very short time if not immediately. This relief will last as long as the opening remains which is usually several years.

When the symptoms are caused by the pressure of the hyperplastic plaques on the nerve trunks, or the bone changes causing a narrowing of the canals through which these nerves trunks pass, any kind of therapy will be disappointing or at least very slowly satisfactory. Slight improvement will come after several months or years, but even as late as this it seems the result is well worth the effort it took to obtain it. Eye symptoms will slowly diminish, and headaches will be relieved enough so that the patient is free from pain most of the time. A coryza reestablishes the headaches more or less, but they are not severe and do not last long. This coryza may be so slight that the patient is not aware of it, but the acutely inflamed area can be seen by a careful examination with the nasopharyngoscope.

In later years of life a natural rarifying of the bone ensues which further helps the case. This is probably what happens when a patient spontaneously improves after the fiftieth year, as has been observed by neurologists in cases of *migraine*.

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DISCUSSION

DR. MYRON T. METZENBAUM, Cleveland:—Some of the cranial nerves and their facial branches

and Meckles ganglion lie in close relation to the walls of the nasal accessory sinuses and may be secondarily involved as a result of a pathological condition of the sinuses themselves.

(1) By a direct spreading of an infection from a sinus to a nerve sheath.

(2) By a toxemia from an infection in one of the sinuses.

(3) By a hyperplasia involving the walls of the sinuses causing pressure on a nerve, or by the hyperplasia partially closing the ostium through which a nerve passes.

Chronic low forms of nasal inflammation build up new tissue resulting in hyperplasia. This change begins in the soft tissues and extends to the bone. If the inferior or middle turbinate, which hang free in the nose are involved there may be no symptoms. But when the hyperplasia causes pressure on sensitive nerves, distressing symptoms will result. This hyperplasia may close up the normal ostium of an accessory sinus and prevent ventilation and drainage, or even impinge on a nerve trunk or branch causing pain throughout its distribution.

When this hyperplasia involves the shell-like wall of the sphenoid, this relatively slight amount of thickening may be sufficient to cause some pressure upon the many important nerves, which lie in such close proximity to the walls of the sphenoid.

The pathology of hyperplastic sphenoiditis is somewhat obscure. It is less known by its microscopic findings than by the symptoms it produces and by the relief of symptoms after operation.

For example the optic nerve lies very close to the walls of the sphenoid and post-ethmoid sinuses. In cases of acute and chronic optic atrophy, the exenteration of the middle turbinate opening of the ethmoid cells and sphenoid sinus, even where pus is not formed, in some cases arrests further destruction of the optic nerve and even permits of its restoration. Such a case is interpreted as being one of hyperplastic sphenoiditis.

At present this subject is obscure only because it has been recognized for less than ten years. When widely studied it promises to disclose a pathological source of many an obscure headache and eye lesion, as well as a great deal of referred pain about the face and neck and possibly one of the causes of asthma.

During August the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Beebe Laboratories, Inc.:

Beebe Protein Milk.

Beebe Modified Buttermilk.

Yours truly,

W. A. PUCKNER, Secretary,
Council on Pharmacy and Chemistry.

Tuberculous Meningitis*

C. E. SHINKLE, M.D., Cincinnati

Editor's Note.—After restating some already acquired knowledge about tuberculous meningitis, Dr. Shinkle stresses Gower's warning that tuberculous meningitis and meningeal tubercle are not the same thing. It is possible, in his estimation, that tuberculous invasion of the meninges occurs more frequently than anybody realizes, and that some of the undiagnosed cases are listed as recovered cases of some other disease. As the prognosis is so bad, experiments, always with the family's consent, are eminently in order. Two of these that appeal to Dr. Shinkle are (1) Savage's idea of etherizing such patients, based upon the good effect of any operation upon tuberculous peritonitis and (2) the use of arsphenamin in full doses for its effect upon tuberculous lesions noted in the treatment of tuberculous syphilitics.

TUBERCULOUS meningitis presents a syndrome that has been recognized as an entity for a long time. Under the names of acute hydrocephalus and basilar meningitis, it had been described long before the tubercle, or for that matter, any other bacillus had been thought of. The disease occurs mostly in children, although it may occur at any age, particularly, when it comes as part of the picture of acute miliary tuberculosis. It is nearly always secondary to tuberculosis elsewhere in the body. No race is immune, the disease bearing a rather constant relation to tuberculosis generally, as far as incidence is concerned.

DIFFERENTIATION OF MENINGEAL TUBERCLE AND TUBERCULOUS MENINGITIS

It should be remembered that meningeal tubercle and tuberculous meningitis are not quite the same thing. Apparently, Gowers' warning to this effect has been forgotten, and not a little confusion has resulted in the way of failure to understand apparent remissions in the clinical course of the disease. Discrete tubercles in the meninges may, of course, break down at any time and give rise to the diffuse meningeal infiltration with swelling and exudate which closes the chapter. They may and do heal with calcification. In this connection it is interesting to state that in many cases of meningitis, clearly non-tuberculous, an X-ray of the removed brain will show little shotty shadows. I have never succeeded in finding the cause of these shadows in a single case, but wonder if they represent previously healed tubercles.

In *tuberculous meningitis proper*, the process consists of a pial thickening and infiltration, particularly at the base, and of scattered pinhead and smaller tubercles along the blood-vessels and in the fissures. This process is amazingly hard to find postmortem, in comparison to the violent symptoms presented during life. Most authors state that the only promising way to hunt for it is in the unfixed brain, spreading open the fissures, and looking along the blood vessels, under water, with a hand-lens. It is not uncommon to find but a single tubercle, large enough for block and section in a fulminant fatal case. Any fixing fluid makes the location of lesions un-

likely by shrinking the tissues. The secondary internal hydrocephalus is easier to find. This can sometimes be attributed to a tubercle blocking the aqueduct of Sylvius, or even the foramen of Magendie. Usually however, it can only be accounted for as a result of pressure upward upon the brain stem simply pressing the walls of the aqueduct together, or to an extension of the swelling to the lining of the aqueduct. It is not unusual to find the ventricles and the cisternae distended with a clear normal looking fluid. The diffuse boggy swelling of the pia-arachnoid gives a peculiar grayish look quickly lost in any fixing fluid. It readily explains the cranial nerve palsies, the blindness and deafness, and the crossed cranial nerve findings so evident in the clinical picture.

The *prodromal symptoms* are usually recognized only in retrospect. It is seen that the child (or adult) has undergone a complete change of disposition, becoming fretful and irritable: that the appearance has changed, the color has been bad and the patient has seemed rundown generally. The appetite has been capricious, the patient has been constipated, has complained frequently of headache, has often had fever blisters about the lips. In some cases there may be a history of previous attacks of illness of a puzzling nature in which the patient has gone into a delirious or stuporous state with no adequate cause in evidence. The actual onset is often quite sudden with delirium, intense headache, photophobia, vomiting and even convulsions. There is complaint of soreness and stiffness of the neck and back and usually of obstinate constipation. Later the patient becomes stuporous, becomes blind or deaf or both, and an occasional peculiar cry—the hydrocephalic cry is noticed. The pulse, which has been rapid, becomes slow and full and the temperature, never excessively high, subsides often to subnormal. The sphincters become incontinent and constipation is often replaced by diarrhoea, probably from intestinal fermentation.

Objectively, the head is retracted, the neck is stiff, the abdomen carinated, the pupils sluggish, often unequal and often dilated and fixed. The superficial reflexes are abolished and the deep reflexes exaggerated. The so-called *tache cerebrale* is present but is not in any way characteristic of this disease. Some cranial nerve findings, as squints, flattening of the face, ptosis, or deviation

*Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 4-6, 1921.

of the tongue are present. These present a very characteristic sign of a basilar process in that they are nearly always crossed—some on one side and some on the other. A left external strabismus may be present with a right deviation of the tongue, or a more marked spasticity on the right side, or some such combination. The reason is readily seen when it is remembered that any basilar process has an opportunity to affect peripheral nerves below their crossing and, by pinching bloodvessels, to starve out motor pathways above their crossing.

Much is written of Kernig's and Brudzinski's signs, and, under the name of Lasegue's sign a Kernig sign is described as a sign of sciatica. These depend upon the stiffness of the back muscles. They are present in tuberculous meningitis. Unfortunately, they are present to a degree, in health. In fact their absence in any case excites a lively suspicion of hypotonus from some cause. They are more marked in any basilar meningitis. But, too often, they only become marked enough for one to be certain of them, long after the need for them has passed—after the case has gone so far that the diagnosis is no longer in doubt. It is a mistake to continue to lay such stress on them in our teaching. Ophthalmoscopic examination shows some stage of choke disk depending upon when it is made. Occasionally the ophthalmoscope will clinch a diagnosis for us by revealing tubercles in the choroid.

LABORATORY AID IN DIAGNOSIS

The laboratory examinations are nearly worthless as far as showing positive evidence of tuberculous meningitis is concerned. They often prove the presence of some other trouble and so aid in diagnosis by exclusion. The spinal fluid is not always under increased tension, it usually is clear, it shows very little, if any, excess of globulin, and very little, if any, increase in cell count. Of course a cloudy fluid showing diplococci, or a positive spinal fluid Wassermann, or something of that sort may prevent a mistake in diagnosis, prognosis, and treatment, so the spinal fluid should always be studied. The differential white count will show a small lymphocytosis as in other forms of tuberculosis.

A new test devised by Tashiro, now in the experimental stage, promises much. It depends upon the fact that the electrical charge of the protein molecule in the spinal fluid differs with the type of meningitis present. This test will undoubtedly be widely used when it has been sufficiently tested, and the results in all forms of meningitis tabulated. For the present it is a promising novelty. The application of the principle involved is simple enough. It is only necessary to use precipitants whose bases have opposite charges and to use them in percentages giving an equal valency. Tashiro uses mercuric chlorid in one test tube and sulpho-salicylic acid in the other. The cerebro-spinal fluid is added

to each of the tubes and in twelve hours the amount of precipitate in each is noted. Animal inoculation with the spinal fluid is feasible. It is too slow and too complicated for any use except that of securing a scientific check upon a series of cases. The same thing can be said of search for the tubercle bacilli in the fluid. Success in finding them is proportionate to the intensity of the search. But no ordinary laboratory can, as a matter of routine, do enough work upon each specimen to give its negatives any value at all.

DIFFERENTIATING OTHER TYPES OF MENINGITIS

The diagnosis is made upon the history and the findings, neither being of much value alone. Acute cerebro-spinal meningitis has a more sudden onset, no prodromal symptoms can be seen in retrospect, there may be an epidemic prevalent and the spinal tap shows cloudy fluid, or at least pleocytosis and increase of globulin. Usually spinal symptoms will predominate clinically as opposed to the dominance of cerebral symptoms in the tuberculous type. The course is shorter and more stormy. Syphilitic meningitis is afebrile, there is history or evidence (clinical or laboratory) of syphilis, the case yields quickly to specific remedies, and the peculiar fact that the headache is often worse at night sometimes gives a clue. The pneumococcus and ordinary pus former meningitides will usually—not always—declare themselves in the spinal fluid. The same thing is often true in our so-called sleeping sickness cases. In tuberculous meningitis it is usually possible, particularly in older children and in adults, to find tuberculosis elsewhere in the body.

PROGNOSIS

The disease runs a progressive course of a month or two, the symptoms becoming stable and the patient dying of exhaustion. Occasionally a patient will live, helpless, blind and deaf, for six months or even longer.

The prognosis is bad. Recoveries have been reported, by reliable observers, where the diagnosis has been proved even by animal inoculation of spinal fluid. But Osler's dictum, "If they got well they didn't have it" is not disproved by one or two cases with all their unavoidable chances of error. The usual experience upholds his statement. Cases, proved postmortem, in which there have been apparent remissions are more often met with. Are these cases of meningeal tubercle which later extended to infiltration of the meninges? Perhaps so. At all events people who see much of tuberculosis, as orthopedists and internists, are becoming more hopeful about tuberculous meningitis. We may be diagnosing merely the last month or two of the disease and missing the first few years. Certainly, our mistakes along this line, as shown in the postmortem room, are disgraceful enough to warrant consideration of the subject from any angle that comes to view.

TREATMENT

The treatment is symptomatic, mostly nursing. The usual drugs are given for pain and restlessness. Bed sore prophylaxis is especially important. The regime of a tuberculous patient is modified only as such especial symptoms as photophobia, delirium and the like dictate. No drug is of proved use in combatting the disease. As the prognosis is so bad, experiments, always with the family's consent, are eminently in order. Two of these appeal to me as worthy of mention here. One is Savage's idea of anesthetizing the patient with ether, based upon the good effect of any operation upon tuberculous peritonitis. The other is arsphenamin in full doses. This is based upon the good effect, not only upon syphilis but upon tuberculous lesions as well, which tuberculous syphilitics often experience from this treatment.

SUMMARY

1. This paper attempts to restate some already acquired knowledge about tuberculous meningitis.

2. Gower's warning that tuberculous meningitis and meningeal tubercle are not the same thing is recalled.

3. It is possible that tuberculous invasion of the meninges occurs more frequently than anybody realizes, and that some of the undiagnosed cases are listed as recovered cases of some other disease.

4. In the treatment of tuberculous meningitis, experiments, with the family's consent, are in order. Two are suggested (a) anesthetization of the patient with ether and (b) arsphenamin in full doses.

707 RACE ST.

PUBLIC HEALTH NOTES

—W. E. Hawthorne of Bedford, has become director of hygiene and physical education of the Youngstown schools, succeeding Dr. Charles B. Lewis, resigned. Miss Dora Koerner, a graduate of Harvard school of physical education and a former instructor in the local schools, has been appointed assistant director.

—Health conditions in Greene County were at a better stage in late August than at any other time during the entire year, according to Dr. R. H. Grube, county health commissioner. With the exception of one case of diphtheria in Spring Valley the county was said to be free from contagious disease.

—A total of 1337 children received treatment at the dispensary of the Akron Children's Hospital from January to September. Diseased and enlarged tonsils, discharging ears, deafness and defective vision were the troubles most frequently found. Approximately two-thirds of the cases had defective vision.

—On September 1 the offices of the sub-district of the Bureau of War Risk Insurance at Marietta were closed and the department reorganized on a smaller scale as a hospital unit. Territory covered by the subdistrict was reduced from six to three counties and Dr. A. J. Brainard, examining physician, transferred to Cincinnati. Dr. John Hill, head of the sub-district, remains in charge of the new unit serving on a part time basis. Drs. A. H. Smith, W. W. Sauer, and C. A. S. Williams retain their connections with the unit in the surgical, eye, ear, nose and throat and X-ray departments, respectively.

—The Canton District Nursing Society recently conducted a campaign for \$18,000 with which to carry on its work next year. An important part of the work is done in connection with the city

clinic at which it supplies nursing service. During the first half of 1921, 1,791 persons received treatment at the clinic. More than half of the attendance at the clinic was in the venereal department, where patients numbered 901. The eye, ear, nose and throat branch ranked second with 341 patients; the baby clinic was a close third with 311, while the medical and surgical clinics had 184 and 85, respectively.

—Miss Anna Grimes, formerly connected with the Akron health department, assumed her duties as visiting nurse for Barberton, September 1. Miss Grimes is employed by the Red Cross and will work in connection with the local health department.

—Contract to provide medical attention for the indigent of Allen County has been awarded to Dr. F. P. Stafford, Lima, at a stipulation of \$1,000 per year. Dr. Stafford held the contract last year.

—As a safety measure the State Public Utilities Commission has ruled that motor buses operating between Ohio municipalities, and which are classed as public utilities under the new Graham law, must be equipped with two doors or openings.

—Health Commissioner D. D. Shira of Akron, has announced that an intensive effort will be made to keep communicable diseases at a minimum in that city during the fall and winter. The number of cases has been exceedingly low recently and a determined fight will be made to prevent any increase. As an aid in the prevention work, an efficient chart system has been installed showing the exact number of cases of each contagious disease and their location on city streets. Dr. F. V. Dunderman has been appointed head of the contagious disease division of the city health department, succeeding Dr. M. D. Miller, resigned. Dr. Dunderman, with the assistance of three physicians and 16 nurses, is directing the medical examination of 36,000 school children.

What the Industrial Rehabilitation Law Means to Ohio --- An Outline of Its Scope and Administration

By W. E. SHAW, State Supervisor

LONG YEARS of steady faith and hard work have finally culminated in the much-needed industrial rehabilitation law. This law providing for the rehabilitation of men and women "disabled in industry or otherwise" was signed by the President on June 2, 1920, and its advantages were at once realized by our own state and the federal plan approved by action of the Ohio Legislature in May, 1921. Until this action was taken we had seen the gradual movement to conserve our natural resources—our food stuffs, our lands, our water power, and our minerals. Through renewed vigilance and attention "safety first" devices caught our eyes around factories, mills, smelters and railroads. Health protection had been urged on every side and now in the unfolding of this great twentieth century plan we are putting forth our time and effort to salvage our industrial workers.

Two million men and women were disabled in industry last year. This is nearly as many men as the United States sent to France to help win the war. Statistics show that 26,000 limbs are lost in American industry every year. This is five times the number of amputations among American soldiers in the great World War.

What may the administration of the industrial rehabilitation law mean for Ohio? Under the terms of the law there is available for the fiscal year ending June 30, 1922, the sum of \$109,420, one-half of this amount coming from the State Treasury and the other half from the United States Government. In charge of the work in this state is the State Board for Vocational Education, which is composed of the

Realizing that the physicians of Ohio are interested in the program which the state of Ohio and the federal government have undertaken jointly in the interest of the disabled, under the provisions of the new Industrial Rehabilitation Law, *The Journal* requested the state supervisor of this work to make a statement on its scope. In the accompanying communication Mr. Shaw emphasizes the important role of physicians in the project.

The Industrial Rehabilitation Act is generally known as a measure for the retraining of persons disabled in industry. The term "rehabilitation" is defined as the rendering of persons disabled fit to re-enter useful occupation. This legislation, therefore, contemplates an educational plan especially adapted to those physically handicapped. By "persons disabled" is meant any persons in industry, or in any legitimate occupation, who by reason of a physical defect or infirmity, whether congenital or acquired by accident, injury or disease, are or may be expected to be totally or partially incapacitated for remunerative occupations, and who may reasonably be expected to be fit to re-enter remunerative occupations after completing rehabilitation courses, or any persons crippled or congenitally diseased, even though they have not been in occupation if through training they can be rendered fit to enter an occupation. Such persons are eligible under the new law.

In administration of the law, the State Board of Vocational Education will cooperate with the Industrial Commission, the State Department of Health, medical and nurses' associations, hospitals and clinics, railroads, employers' and employees' associations, insurance companies, etc., in order to find eligible persons.

State Directors of Education, Finance, Industrial Relations, Agriculture, and Commerce. The state headquarters office is in the Department of Education, State House Annex, Columbus, where a letter directed to the supervisor will receive prompt attention.

First, attention is to be centered on those most seriously disabled who are in need of training to overcome the handicap of a disability. The supervisor's office receives weekly notices from the Industrial Commission and thus establishes contact with current cases. However, the law is so worded as to include those whose disabilities are not the direct result of industrial accidents. Note the words "disabled in industry or otherwise." It even includes those born blind, or deaf, or with deformities which inevitably mean a handicap.

Under the law all training costs for tuition, textbooks, tools, and supplies may be paid. No maintenance is provided by law, but usually the award of the Industrial Commission will meet this need. If under existing circumstances no award can be made by the Industrial Commission some way can be found to meet the problem. Training courses will be given in the home city whenever possible and existing shops, factories, and schools will be used. During the training period there will be frequent follow-ups and upon completion of the course a suitable position will be sought where the disability will not interfere with the doing of an honest day's work at a living wage.

How may the physicians and surgeons of Ohio help in this work? In all of our largest cities contacts have been made with the federated so-

cial agencies and one general clearing house established for the city. In this way the cooperation of the hospitals, the visiting nurses, the physicians and surgeons has been assured. If no such agency is known to you, will you not report your cases direct to the State Supervisor for Industrial Rehabilitation, Department of Education, Columbus, giving the name, local address, age, number of dependents, nature of impairment, date of occurrence, and any other salient points likely to be of service. On receipt of your communication, action will be started promptly. Will you not do this service whenever necessary for someone who has been the unfortunate victim of an accident?

In times past the public has not always exercised good will and good sense toward the industrial cripple. Too many disabled men and women have fallen when required to put forth an unnatural effort to overcome a handicap. Too many others have accepted the easy doom of dependency. Let us see to it that the disabled man is regarded as an economic asset and a useful member of society. Enable him to respect his daily wage because it represents an honest day's work in normal competition with his fellow men. Have him throw away the blue glasses; show him how to defeat discouragement. And who can better point the way than you who administer ceaselessly to relieve human suffering?

"Hands Off the Doctors"

(Continued from page 668)

cal profession it is encouraging to observe that the newspapers, the molders of public opinion, have not been misled in their true thought and better judgment by the sort of "medical advertising" and limited practitioners' blatant claims which appear in the advertising columns of many newspapers.

Again, The Sheppard-Towner Bill

With the so-called Sheppard-Towner maternity bill now in the hands of the committee on interstate and foreign commerce of the House of Representatives following its enactment by the United States Senate, the attention of the medical profession has been called emphatically to the provisions of this measure, which has been commented on in previous issues of this *Journal*.

A recent statement by Dr. J. J. Kindred, who by virtue of the fact that he is a member of the National House of Representatives is of particular interest, holds that:

"... Aside from its invasion of states' rights and the creation of powers within the federal government to do many of the things for the citizens of the states, which things the citizens of the respective states should do for themselves, the measure, if it becomes a law, will probably seriously interfere with the rights, privileges and emoluments of the medical profession, as

most measures do which go too far in the direction of state medicine.

"But perhaps the most un-American and unfair provision of the bill is that, while it provides for the exercise of the option on the part of the several states to decline to receive any benefits from the measure, it saddles upon all states alike the burdensome taxation necessary to create appropriations carried in the bill...."

As an illustration of the latter point made by Representative Kindred it is readily understood that if one of the larger states such as Ohio were to fail to cooperate in or fail to accept any benefits accruing from the measure, it would mean that the State of Ohio must pay an increase in federal taxation much out of proportion to that borne by other states. In other words, the proposal is considered by many as an unwarranted invasion of the field of the state and local health authorities. The measure in its present form would provide for a uniform subsidy of \$10,000 to each of the states, or a total for this item of \$480,000 and an additional one million dollars for national administration and for apportionment to the states in proportion to equal amounts provided by the individual states for the said purpose.

To the ultimate object of the proposed legislation—the protection of the health of mothers and infants—there can be no opposition. With the details, the plan and method of procedure, however, there is a distinct difference of opinion. Undoubtedly the law if administered with proper medical executive supervision, would be constructive in an educational way. While approving the idea of educational propaganda and investigation emanating from the federal government, the medical profession is quite generally opposed in principle to the control of health measures by non-medical individuals of boards, and favors the local or state control of health activities as distinguished from federal unless there be proper coordination of such activities under a national department of health equal in means and authority to the other cabinet positions.

Appointed Chief Examiner of Nurses

Miss Augusta M. Condit of Columbus is the new chief of the nurses' committee of the State Medical Board. Miss Condit has been assistant superintendent of the Instructive District Nurses' Association and obtained leave of absence from that position to accept the new appointment. She is a graduate of Protestant Hospital, Columbus, training school for nurses and has been in public health work for a number of years.

The fifth Annual Roll Call of the Red Cross will be held, November 11-24. This is the annual period during which those who are already members are asked to renew their memberships in the Red Cross, and those who are not are asked to join.

Section Officers Invite Submission of Titles for Papers for 1922 Annual Meeting Program

WITH an early start and the proper degree of enthusiasm the success of a project is generally assured. Therefore, there are bright prospects for the next annual meeting of the State Association in Cincinnati. At the last session of Council preliminary plans for the meeting were discussed, and May 2, 3 and 4 selected as the dates.

The program committee, consisting of Drs. S. J. Goodman, Columbus; R. K. Updegraff, Cleveland, and W. D. Haines, Cincinnati, has requested that the complete scientific program be submitted to Council for consideration at its January meeting. The section officers are now endeavoring to line up well-qualified speakers and interesting subjects for their programs for the coming session and invite the submission of titles for papers from prospective essayists.

The officers of the Surgical Section have pursued a systematic plan that will result in a well-balanced program and a thorough discussion of the subjects chosen. To begin with, the officers desired to know what problems were most agitating the surgical mind of the Association and what subjects were considered most opportune for discussion. Therefore, the following letter and questionnaire were sent to those registered in the Surgical Section and to all Ohio members of the American College of Surgeons practicing general surgery:

"Dear Doctor:

The officers of the Surgical Section of the Ohio State Medical Association wish to ask a statement of preference as to the program for the year 1922. The object of this section seems to be a mutual improvement of the surgical talent of the state and a maintenance of the highest excellence of surgical practice. We wish the assistance of your attention to the following questionnaire:

It is proposed for the 1922 program, to group two or three papers about each of two or three surgical subjects, these papers to comprise various phases or further developments of the same subject. In addition to these, there would necessarily be a number of individual papers on the program. Will you please check your first, second and third preference of subjects in the following list? The papers should not be over twenty minutes in length and any historical or literary resume, although included in the manuscript, should not be read at the meeting except in an abbreviated form. Lantern slides or other illustrations always add to the paper, the object being to get the subjects briefly and clearly to the audience.

1. Intracranial trauma.
2. Surgery of the head.

3. Surgery of the chest, including the diaphragm.
4. Surgical disease of the stomach and duodenum.
5. Surgical disease of the gall bladder and pancreas.
6. Surgery of the spleen.
7. Appendicitis.
8. Surgery of the large gut.
9. Surgery of the kidney and ureter.
10. Surgery of the prostate and bladder.
11. Bone and joint surgery.
 - Fractures.
 - Orthopedics.
 - Infections.

Have you a paper for the next meeting? With what subject does it deal? A return of this questionnaire before July 10th will be appreciated."

Replies were received in the order of their preference, as follows:

1. Bone and joint surgery.
2. Surgical disease of the gall bladder and pancreas.
3. Surgery of the head.
4. Surgical disease of stomach and duodenum.
5. Surgery of the urinary tract.
6. Surgery of the large gut.

While requests for places on the program did not coincide with the above preferences, an effort will be made to make up the program from the requested subjects. If it is possible to consider a subject from etiology through diagnosis and pathology to treatment and its results, this will be done, and to this end the officers are in a receptive mood for such papers. Those desiring to contribute are requested to notify one of the officers of the Surgical Section not later than October 10th, giving title of paper.

The officers of the Surgical Section have prepared a list of pertinent suggestions for those who are writing papers for presentation before that section, which will be found equally helpful by those who expect to participate in the proceedings of other sections. In view of the fact that a large amount of time is consumed at these meetings by papers and discussions which are but text book resumes, it is believed that papers with long bibliographic abstracts or historical sketches are entirely inappropriate for the section meetings.

1. A short conclusion from the recent literature as an introduction to the author's point helps to focus attention.

2. After such introduction "come directly to the point—omit every unnecessary detail and avoid repetition." The object of the paper should be clearly stated and the evidence upholding the

author's beliefs and practice given in numerical order.

3. A few charts, drawings or lantern slides will often convey a large part of the author's contribution to the audience and it is hoped these will be much used at the next meeting.

4. Accuracy in the choice of words which express the precise meaning desired is fundamental. Two or more words should never be used where one conveys the meaning. The force of a paper is largely in such words grouped in short, well-balanced sentences.

5. Ask a friend whose literary and scientific ability you respect to read and criticize your paper. "Talking it over" serves to contribute to and crystallize one's thought.

6. Two or three clearly expressed conclusions leave no doubt as to the author's beliefs.

(The medical chairman's address at the A. M. A. 1920 meeting may be read with great profit. J. S. McLester, LXXIV, 1295.)

For the convenience of those who wish to communicate with the section officers regarding places on the program, their names and addresses are:

Medical—Dr. C. L. Cummer, chairman, Rose Building, Cleveland; Dr. Julian Benjamin, secretary, 4 West Seventh Street, Cincinnati.

Surgical—Dr. F. C. Herrick, chairman, Rose Building, Cleveland; Dr. Howard Stitt, secretary, Washington C. H.

Obstetrics and Pediatrics—Dr. Walter W. Brand, chairman, Colton Building, Toledo; Dr. G. W. Brehm, secretary, 677 North High Street, Columbus.

Eye, Ear, Nose and Throat—Dr. William Mithoefer, chairman, 19 West Seventh Street, Cincinnati; Dr. W. W. Alderdyce, secretary, 513 Madison Avenue, Toledo.

Dermatology, Proctology and Genito-Urinary Surgery—Dr. Augustus Ravogli, chairman, 5 Garfield Place, Cincinnati; Dr. Hugh Baldwin, secretary, 347 E. State Street, Columbus.

Nervous and Mental Diseases—Dr. Charles W. Stone, chairman, Rose Building, Cleveland; Dr. G. G. Kineon, secretary, State Hospital, Galipolis.

Hygiene and Sanitary Science—Dr. R. R. Richison, chairman, City Health Department, Springfield; Dr. Arlington Ailes, secretary, Sidney, Ohio.

Heads Tuberculosis Bureau

Dr. J. A. Frank, for several years connected with the staff of the State Department of Health, has become chief of the bureau of tuberculosis in the department. Dr. Frank will look after extension of sanatoria in the state and will have charge of the clinics which are to be operated in connection with the State Sanatorium in Mt. Vernon.

"Routine Physical Diagnosis" Proves Popular Subject for Post-Graduate Study

The 1921 series of post-graduate lectures under the direction of the Committee on Medical Education of the State Association, had an auspicious start in early September. Up to the 15th of the month four ultra-successful meetings had been held and much enthusiasm was being shown in plans for the balance of the series in the latter part of the month and October. The subject for study in this year's series is "Routine Physical Diagnosis," and the lecturers are Drs. J. H. J. Upham, Columbus; R. K. Updegraff, Cleveland, and Roger Morris, Cincinnati.

The first meeting was held at Xenia on September 7, when Dr. Upham addressed a group of 120 physicians from Greene, Clark, Madison, Clinton, Warren, Montgomery and Preble Counties. On the following day, Dr. Upham spoke at Piqua before an assemblage of 80 physicians from Miami, Darke, Shelby, Logan and Champaign Counties. The Athens meeting on September 13 drew an attendance of 60 from Athens, Meigs, Hocking, Vinton and Gallia Counties. At each of these gatherings the lecture and Dr. Upham's style of presentation were highly complimented.

Forty-two physicians attended the group meeting at Painesville for physicians in Lake, Ashtabula and Geauga Counties. On this occasion Dr. Updegraff was the lecturer. He began his address by speaking first of the gait, countenance, position or movements of the patient as he enters the office. Next he spoke of the examination of the pupil, the nose, the teeth, tonsils, skin, pulse, tongue, respiration, then leading up to inspection, palpation, percussion, and auscultation, the patient being stripped to the waist. He emphasized the great value of modern office equipment, the fluoroscope, radiograph, sphygmograph, apparatus for blood count, complete urinalysis outfit, the microscope, etc. Demonstrative examinations were made of two patients furnished by the Lake County committee. At this meeting Dr. John Phillips of Cleveland was also a guest and made an excellent address on "Endocrinology."

Other meetings scheduled for September were: Bowling Green, September 15; Uhrichsville, September 22; Mt. Vernon, September 27; Lancaster, September 29. October meetings will include *Alliance, October 4*, for the benefit of physicians in Stark, Mahoning, Carroll, Columbiana and Wayne Counties; *Kent, October 6*, for Portage, Summit and Trumbull Counties; *Elyria, October 11*, for Lorain, Erie, Huron and Medina Counties; *Galion, October 13*, for Crawford, Wyandot, Marion and Morrow Counties; *Lima, October 18*, for Seneca, Hancock and Sandusky Counties. Portsmouth and Hamilton will also have meetings in October, the dates of which have not been determined.

Mansfield Chosen by National Agency as Field for Unique Demonstration of Possibilities of Child Health Work

MANSFIELD and Richland County have been selected by the National Child Health Council as the field for its demonstration of the value of a comprehensive program for the health of mothers and children. The selection was announced after a strong competition among eighty-seven communities in various parts of the country, which for several months past have striven for this distinction and advantage.

The National Health Council is composed of representatives from the following national organizations: The American Child Hygiene Association, American Red Cross, Child Health Organization of America, National Child Labor Committee, National Organization for Public Health Nursing and the National Tuberculosis Association. The Council has available the sum of \$200,000 for this demonstration which will cover a period of five years and include every angle of public health and preventive medicine.

The work will be directed by Dr. Walter H. Brown, formerly health commissioner of Bridgeport, Connecticut, who has recently relinquished his position with the Commission for the Prevention of Tuberculosis in France and returned to America to undertake his new duties. Much interest in the undertaking has been evinced by health and welfare organizations throughout the country and its progress will undoubtedly be watched closely in view of the fact that it is the first movement of the kind in this country. Previous demonstrations have been specialized, such as that at Framingham, Massachusetts, which centered around tuberculosis.

While the work will be managed and supervised by the National Child Health Council, local organizations and individuals will take an active part, and the community will assume part of the financial responsibility. A total of forty-two city and county organizations have pledged co-operation. As the work proceeds it is the hope of the Council to have officials of local bodies gradually take it over, until at the end of the five-year demonstration period they will be in complete charge and prepared to continue if results have been satisfactory.

One of the first steps to be taken in connection with the demonstration will be a morbidity survey and the collection of all possible statistics. At the end of the demonstration a summary and another survey will permit ready visualization of the accomplishments.

For the site of the demonstration the National Child Health Council sought what it termed a typical American community. Singularly, two other Ohio communities—Newark and Licking County, and Hamilton and Butler County—were among the strongest contenders for selection,

and when the choice was reduced by a committee to six communities Ohio still had two "in the running," namely, Mansfield and Newark.

Mansfield and Richland County strike a fair average in the requirements considered essential for the demonstration. It was specified that the population of the town or city should be between twenty and thirty thousand, and that the population of the county in which the city or town was located should preferably be between fifty and sixty thousand and should be fairly stable. The age distribution of the population was required to be near the average, especially as to the percentage of children and babies, and there should not be any strikingly predominant racial stocks.

Industrially, the city was required to have approximately an average percentage of its population engaged in manufacturing as compared to communities of similar size, and that there should be a variety in the industries of the community and no one industry should employ a large proportion of the industrial population. The surrounding area should be an agricultural territory.

One of the principal conditions was that the city should be in the birth registration area and itself should have fairly complete vital statistics. The mortality of infants and children should not be strikingly abnormal.

The community should express a hearty and fairly general desire to have the demonstration tried there, and the state and local health and school authorities should join in or approve of the invitation. The attitude of the citizens and officials should be such as to indicate a probability of increasing expenditures for child health work from community sources, as the demonstration progresses, in order that it may be largely on the basis of local self-support at the end of the demonstration period. The present health laws of Ohio were no doubt a big factor in the determinations of the Council, for in no way does the Hughes-Griswold health law limit the funds to be expended for health purposes, and the operation of the local and county health districts during the past year and a half have indicated that this state is working under potentially the most efficient health laws in the country.

Dr. Fred Fletcher and Miss Bertha M. Holland, both of Columbus, were married September 1. Dr. Fletcher is a member of the faculty of the Medical College of Ohio State University, a member of the surgical staff of Grant Hospital, and during the war served in the medical corps overseas.



HOSPITAL NOTES

The annual report submitted by superintendents of state institutions to Welfare Director MacAyeal within the past month present some interesting facts. The reports show an increase in the daily average attendance at the 23 institutions under the Department of Welfare's direction of 217 during the fiscal year ending June 30.

The largest gain of any institution for the insane was at the Columbus hospital, where the number of patients increased from 1882 a year ago to an average daily attendance of 1934 for the past year. At the Cleveland State Hospital the attendance increased from 1714 to 1771, while at Longview there was an increase from 1486 to 1502, and at Massillon from 1808 to 1854. The Lima State Hospital for the criminal insane showed an increase of 18, having a total population of 868 at the end of the fiscal year, as compared with 850 a year ago.

Every county in the state is represented in the population of the Institution for Feeble-Minded at Columbus. Cuyahoga County leads with 403 patients, more than the combined representation of Franklin, Montgomery and Lucas Counties.

Of especial interest was the report of the Ohio Hospital for Epileptics at Gallipolis. Among the considerations brought out by Dr. G. G. Kineon, superintendent of the hospital, were the greater susceptibility of white people to epilepsy than negroes, and the apparent immunity of epileptics from tuberculosis. Since the institution was opened on November 3, 1893, there has been a total of 7236 patients received, and of this number 6990 were white and only 246 colored. While there have been 2433 deaths at the institution during this period of time or from the opening to June 30, 1921, but three have died from tuberculosis.

The report gives details of each case and indicates that much of the epilepsy of today is hereditary. Of the total number of patients received at the institution, 1719 have either parents or close relatives that are epileptic or insane.

During the year ending June 30, 1921, 275 were received at the institution, of which 177 were men and 98 women. Of the entire population since the institution was opened, 5636 were single, 1276 married, 241 widowed and 83 divorced. Only 300 recoveries are reported in the entire history of the institution.

Practically all trades and occupations are represented in the population, children of school age, listed as students are the most prominent. There were 200 of these in the membership while there

were 47 painters, 86 miners, 86 salesmen, 63 machinists, 39 merchants, 29 blacksmiths, 17 printers, 19 school teachers and 940 under 15 years of age. Five editors are included in the membership of the institution, while one reporter, one fisherman and one jeweler indicate the safety of these professions. During the entire history of the institution, only one mail clerk has ever been received for treatment, and he later showed such improvement that he was released.

The average daily attendance for the year was 1568 with 1594 in the institution at the end of the fiscal year.

—A thirty per cent. increase in the cost of hospital care for indigent sick persons in the city of Youngtown in a recent summer month is attributed to business depression. The cost of such care during the month was \$6,000, whereas \$4,000 is the average figure.

—Extensive improvements in the way of new equipment, furniture and redecorating have been made at Protestant Hospital, Columbus.

—Through the efforts of local physicians and the Exchange Club, Defiance hospital which was closed early in the summer at the expiration of the lease on the building, has been reopened.

—Work on alterations and additions to the Alliance City Hospital which were undertaken in late August at a cost of \$106,448, is being pushed rapidly. Plans include the addition of a new story to the old building, and construction of an entirely new wing in the rear.

—The first definite move toward the erection of a Perry County Hospital was taken recently by the county commissioners in tendering the Perry County Medical Society a site on the grounds of the children's home for the proposed hospital. The physicians, who have been fostering the project for several years, will raise funds for the erection of the hospital.

—Dr. Iva M. Lickly, formerly of Lima, has assumed the position of pathologist at Springfield City Hospital, succeeding Dr. N. L. Burrell, who resigned to return to his home in Kentucky.

—Work on the new Youngstown Municipal Hospital will be completed within a month, at which time it will be turned over to the city safety director for operation.

—Ground has been broken for a \$25,000 addition to Columbus Radium Hospital which will increase the capacity of the institution from 30 to 55 beds. A residence for nurses recently completed provides facilities for 18 nurses. Dr. E. D. Helfrich, formerly of Galion, has become a member of the hospital staff, specializing in eye, ear, nose and throat work.

The Cancer Campaign

Andre Crotti, M. D., Chairman.....Columbus

F. E. Bunts, M. D.....Cleveland
C. W. Moots, M. D.....Toledo

Louis Ransohoff, M. D.....Cincinnati
Don K. Martin, Sec'y.....Columbus

With this issue of *The Journal*, the annual campaign for the control of cancer, under the auspices of the Committee on Control of Cancer of the State Association, gets under way. The last campaign directed by this committee met with the enthusiastic support and cooperation of both the medical profession and the laity, and the committee hopes that its efforts during the coming months may be as well favored.

It will be remembered that the last campaign in Ohio was fittingly terminated by "Cancer Week," during which the message of the necessity of cancer control was taken to the public. So successful was this innovation that the American Society for the Control of Cancer has announced that as part of its national educational

campaign it will observe the period starting October 30 and ending November 5, as "Cancer Week," and the state committees, including that of Ohio, have selected the same period. Efforts will be concentrated during this week toward reaching the laity, hence the physicians of the state will be asked to cooperate with the various county chairmen, appointed by the committee, in holding public meetings and giving lectures on the subject of cancer.

As in the previous campaign the medical profession will be reached by means of cancer lectures, clinics and monthly articles on the subject. The following article by Dr. Baldwin is the first of a series to be published in the forthcoming campaign:

Cancer of the Genito-Urinary System

HUGH A. BALDWIN, M. D., F. A. C. S., Columbus

THE genito-urinary system is subject to invasion by every form of tumor both benign and malignant. As compared with other parts of the body most of the genito-urinary system is inaccessible and consequently a pre-operative diagnosis of malignancy is seldom made previous to operation. Because of the difficulties in diagnosis it is seldom made in time so that operation promises anything more than palliation. A few permanent cures encourage us, however, to hope that every case may be the exceptional case that gets well. It is very fortunate indeed that the unfavorable prognosis in malignant disease of the system under discussion is to some extent off-set by its comparative infrequency.

Cancer of the prostate, for instance, is not nearly as common as cancer of the cervix or uterus, and it is well that this is true because very few cases of cancer of the prostate are ever saved. Whereas, I believe the gynecologist is confident of bringing about an absolute cure in quite a large percentage of cases of uterine cancer.

It might be well to take up in order the various portions of the genito-urinary system most frequently attacked by cancer.

Cancer of the penis, as a rule, presents very little difficulty in diagnosis, although within the last year I saw a case of extensive cancer of the penis with practically complete erosion of the glans and extensive involvement of the lymph

nodes which had been under treatment for quite a long while with diagnosis of chancroid. As a rule, however, the cauliflower appearance of the malignant excrescence and its refusal to heal under any form of treatment makes the diagnosis easy. If the case is not too far advanced, a radical operation with complete extirpation of the penis and the lymph glands in the groin offers some hope of a permanent cure. With the complete removal of the penis it is usually a mercy to remove at the same time the testicles so as to keep the patient from feeling the terrible pangs of sex hunger which cannot possibly be gratified.

Prostatic cancer has been a subject for study and discussion, but unfortunately this has been largely of a theoretic nature and has been of little practical use. In many ways the prostate closely resembles the mammary gland and the pathological and histological conditions are quite similar. Unfortunately, the diagnosis is seldom made early in prostatic disease and possibilities of a successful radical operation are almost nil as compared with the breast. The diagnosis of a cancer of the prostate can almost always be made before operation, but unfortunately we seldom see the cases until the disease has become extensive and therefore hopeless.

A number of years ago it was said that 10% of prostatic cases were cancerous. This statement was considered very radical and entirely too high. Now, it is considered very conserva-

tive to put the proportion at 20%, and I am inclined to believe that cancer of the prostate is much more common than generally supposed.

The symptoms of cancer of the prostate are those of prostatic disease in general, and those of us specializing in work of this kind know only too well how seldom patients come to us in the early stages of their trouble. They have usually suffered for years before considering any form of surgical intervention, and frequently do not consult a specialist until absolutely forced to by their inability to urinate or to pass a catheter. If these cases are benign hypertrophies, then by appropriate preliminary treatment, a carefully planned operation, usually done in two stages, we can overcome the disastrous results of delay and bring them back to a very good degree of health, but as one out of every five of these cases is malignant, delay has already given death an opportunity to mark the victim for his own.

Cancer of the prostate usually begins in the posterior or sub-urethral lobe where it can be easily palpated by the finger and were we to examine through the rectum all of our cases presenting the least sign of urinary difficulty, it is possible that we would recognize more cancer cases in their incipency and perhaps accomplish a cure more often than we do.

A cancerous prostate may be either smooth or nodular, but in either case it will almost certainly be stony hard and the median sulcus between the two lateral lobes will be obliterated. In the later stages when it has already involved the seminal vesicles and other contiguous structures, it will lose the usual sharply-defined border of the hypertrophied prostate and fade off into the surrounding structures.

The most frequent type of cancer of the bladder is the papilloma. These are comparatively frequent and their diagnosis with the cystoscope comparatively easy. The question of malignancy, however, is very hard to determine, even when benign, they are like the ordinary wart, very apt to return unless completely destroyed and the line of demarkation between the benign and malignant papilloma is very vaguely drawn and it seems to be possible for the benign type to undergo a malignant degeneration. It is therefore wise to consider every case of vesical papilloma as being either malignant or potentially malignant and to treat it accordingly. If the tumor is small or isolated so that it can be conveniently reached, it can be treated through the cystoscope and destroyed by the high frequency current applied to its base. This may demand a number of treatments with a following up of the case for months afterwards in order to assure its complete eradication. Where the masses are large or inaccessible, or the treatment excessively painful, it is frequently better to make a radical operation on the bladder through a Kelly-Pfannensteil or a transperitoneal incision, removing the entire tumor mass with a safe mar-

gin of the bladder wall. Extreme care must be taken in their removal against the reimplantation of detached cells in some other part of the wound. Like southern moss they will start to grow wherever they are dropped.

A few cases of primary cancer of the ureter have been reported, but these are so rare as to be mere surgical curiosities and of no clinical importance.

In every case of hematuria we must suspect malignant disease and we must not be satisfied until we have been able to locate definitely the source of the bleeding and the exact cause, with removal if possible.

To go into the subject of hematuria as a symptom is impossible at this time, but it is frequently a sign of malignancy in either the bladder or the kidney. If the hematuria is at all marked, cystoscopic examination will disclose the source of the bleeding, although frequently the hemorrhage is of an intermittent type so that the cystoscopic examination may be made at a time when the urine is free from blood.

It is practically an impossibility to make a pre-operative diagnosis of cancer of the kidney. Stone, tuberculosis, nephritis, essential hematuria, etc., will all give us blood in the urine. Ordinary cystic kidneys, polycystic kidneys, hydro- or pyonephrotic kidneys will all give us a lump in the loin which can in no way be distinguished from a malignant tumor. As indicated in a previous paragraph, operative intervention is indicated in any case, the sooner the better, and if a cancer is found its removal gives a fair chance for complete recovery. This is especially true of hypernephroma if metastasis has not taken place.

There has been much discussion as to the exact pathology of hypernephroma, but this is a discussion for the pathologist and not the clinician. Clinically we classify them as a malignant growth and very prone to metastasis, especially to the bones. Fortunately they are of rather slow growth, sometimes taking years in their development, and tend to remain incapsulated, spreading only by metastasis usually through the blood stream. If therefore we can operate on them fairly early and as carefully as possible so that no fragments will be forced into the circulation during our manipulation, the chances of cure are fairly good.

Embryonic tumors, usually classified as sarcomas, occur quite frequently in children. They are usually unrecognized until they make their presence known by their great size. Because of the fact that a large hydronephrosis or cyst may produce a similar tumor, an exploratory operation is advisable. I have operated on a number of these cases and in one case was rewarded by finding what was apparently a very large cyst of the ureter. This child made a good recovery and has of course remained well since. The other cases all suffered a prompt recurrence and death,

but in nearly every case life was prolonged, and in one case saved.

In patients old enough to be cystoscoped it is sometimes possible to make a presumptive diagnosis of hypernephroma from the roentgenographic picture of the renal pelvis. After injecting the pelvis with some silver preparation, or better yet, with a 20% sodium bromide solution, we find that the X-ray picture shows a distorted renal pelvis instead of the small sharply outlined normal pelvis in which the various calyces can be outlined. We find the outlines of one or two calyces missing, but on the other hand, the others may be greatly exaggerated, but even this is not pathognomonic.

If I were asked to name the symptoms which would lead one to think of the possibility of a cancerous involvement somewhere in the genito-urinary tract, I would name hematuria, disturbance in micturition, tumor, for whenever any of these symptoms make themselves manifest our patient should be subjected to a rigid scrutiny with the idea of determining the exact cause of the symptom or symptoms presenting. Then we will be enabled to reach these cases earlier and with a consequent better chance of a permanent cure. Here as elsewhere in the body the chance of cure increases in direct proportion to the promptness of the diagnosis.



Scene at the Ashtabula County diagnostic clinic (chiefly orthopedic) August 3. Dr. Clarence Hyman of Cleveland acted as consulting orthopedist at this clinic, which was one of the series being conducted under the joint auspices of the state and local health departments, the Society for Crippled Children of the Rotary Clubs, the state and local medical societies, and other groups interested in the movement for the benefit of crippled children, most of whom because of indigent parents have not heretofore received proper attention. The clinics are rendering a service in bringing to proper medical attention cases which may be benefitted by treatment, and in placing the state in touch with others which deserve hospitalization.

A successful clinic was held at Jackson on August 10, 11, 12 and 16, when 250 persons were examined in the general diagnostic branch on the first three dates and 25 were examined in the supplementary orthopedic branch on the latter day. The general diagnostic clinic was intended for only a one-day session, but two and a half days of intensive work were necessary because of the large number of persons from all parts of the county present for examination. Several cases of trachoma, tuberculosis and organic heart lesions were revealed, emphasizing the importance of early corrective procedure. Dr. H. T. Thornburgh of the State Department of Health served as diagnostician for the general cases; Dr. W. H. Parker of Wellston for eye, ear, nose and throat cases, and Dr. William Roderick of Jackson for dental cases. Seven cases of acute infantile paralysis were found in the orthopedic branch, at which Dr. A. M. Steinfeld of Columbus acted as consultant.

ACADEMIES AND COUNTY SOCIETIES

SECOND DISTRICT

Darke County Medical Society held an enthusiastic meeting at Greenville, September 8. Dr. J. B. Ballinger of Versailles gave an instructive address on "The Medical Paper, Its Preparation and Its Delivery," which was much appreciated. Dr. William Lynch gave a reminiscent talk on the practice of medicine and the improvement that has taken place since his boyhood days. After the regular program the *Darke County* Hospital was discussed. Dr. S. A. Hawes made known the hospital needs and asked everyone present to cooperate in its completion in the near future.—B. F. Metcalfe, Correspondent.

THIRD DISTRICT

Logan County Medical Society met in regular monthly session, September 8, in the Chamber of Commerce rooms at Bellefontaine with 15 members present. A good chicken dinner was enjoyed, after which Dr. W. H. Carey, county health commissioner, read an excellent paper on "The Relation of the Physician to the Public Health." The society indorsed the health board's action in calling for the enforcement of the city ordinance requiring a tuberculin test of all cows furnishing milk for the city. The president appointed a committee to report, in full, to the society the details of the Sheppard-Towner bill now before congress.—M. L. Pratt, Secretary.

FOURTH DISTRICT

Ottawa and Sandusky County Medical Societies held a joint meeting in Port Clinton, September 7th. After the wants of the inner man had been satisfied with a chicken dinner, Dr. Brindley, president of the *Ottawa* Society, called the meeting to order.

A paper entitled, "Dermatitis Exfoliative," was read by Dr. Ingram, of Curtice. The essayist expressed the belief that the discussion of this topic in all text books on dermatology was too brief; also that it was a mistake to believe that the condition was not found in childhood, as stated in works on pediatrics. A discussion of this paper brought out the fact that the disease not infrequently is concomitant with some constitutional disease as leukemia.

Dr. Pontius then gave a talk on "Bone Surgery." He discussed the different methods of treating obstinate fractures. He felt that the Lane Plate was of little use as compared to the bone graft. He strongly favors autogenous bone graft. Dr. Pool, in continuing the discussion, observed that Dr. Pontius made it a little too strong; that the plate has its place, even though ultimately removed. Perhaps Dr. Pool's most striking argument was directed against the den-tists. He insisted that their operative proced-

ures are devoid of all aseptic precautions; that this is a situation fraught with horrible possibilities and that this defect ought to be remedied.

Three distinguished guests were present—Major Ferrenbaugh, Major Hodges and Captain Murphy. These men gave distinction and added greatly to the dignity of the meeting, and by their interesting and peppy talks brought a wholesome delight to all present. Their presence was especially interesting to one of *Sandusky County's* faithful members, Captain Murphy and Dr. E. A. Baker having been in training camp together.

A number of interesting clinical cases were cited. Some lively comment on the purpose, importance and dignity of the profession, and the necessity for successful organization were forthcoming. The meeting was one long to be remembered by all those who had the opportunity to be present. An invitation was extended to the *Ottawa County* Medical Society to meet with *Sandusky County* in December. Same was enthusiastically accepted.—C. I. Kuntz, Secretary.

SIXTH DISTRICT

Summit County Medical Society, meeting at the People's Hospital, Akron, September 6, had as its guest and visiting essayist Dr. E. Otis Smith of Cincinnati, professor of Genito-Urinary Surgery at the University of Cincinnati. Dr. Smith delivered an illustrated lecture on "Kidney Diagnosis." The second paper of the program was given by T. H. Baughton on "Anaphylaxis and Disease." Attendance 75.—A. S. McCormick, Secretary.

EIGHTH DISTRICT

Morgan County Medical Society had a most excellent meeting at the Malta Hotel, August 18. A splendid dinner was followed by the program, in which Dr. C. V. Davis read a paper on "The Medical Profession and the Public Health." Discussion was led by Drs. Humphrey, Northrup, Leeper, Fred Barker of Dayton, and Emmett Fayen, formerly of Cincinnati, but now director of Rocky Glen Sanatorium.—D. G. Ralston, Secretary.

Muskingum County Medical Society enjoyed its annual outing, September 1, at Avondale, on Buckeye Lake. Speakers for the occasion were Drs. John Dudley Dunham of Columbus, and C. A. Coleman of Dayton, who presented papers on "Diseases of the Kidney." A chicken dinner, boat ride and other features of entertainment added interest.—M. A. Loebell, Secretary.

TENTH DISTRICT

Ross County Academy of Medicine met in Chillicothe on September 6. After a chicken dinner at the McCarty Hotel, Dr. John Dudley Dunham of Columbus talked on "Diagnosis of Kidney Conditions." The attendance was unusually large and Dr. Dunham's paper was thoroughly appreciated and discussed.—G. S. Mytinger, Secre-



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Valuable Data on Ohio Hospital Facilities in the Annual Presentation of Statistics by A. M. A. Council

ALTHOUGH Ohio suffers a shortage of hospital facilities because of unequal distribution of institutions, the state has a ratio of hospital beds approximating the average proportion which hospital experts estimate as adequate, and at the same time slightly under the average ratio for the entire country. These facts are brought out in the annual presentation of hospital statistics just issued by the Council on

six tables, showing (1) the total number of hospitals by states; (2) the number of counties in each state with and without hospitals; (3) hospitals shown by states in district groups; (4) hospital facilities of fifty larger American cities; (5) hospitals other than those giving general care; (6) hospitals of all types.

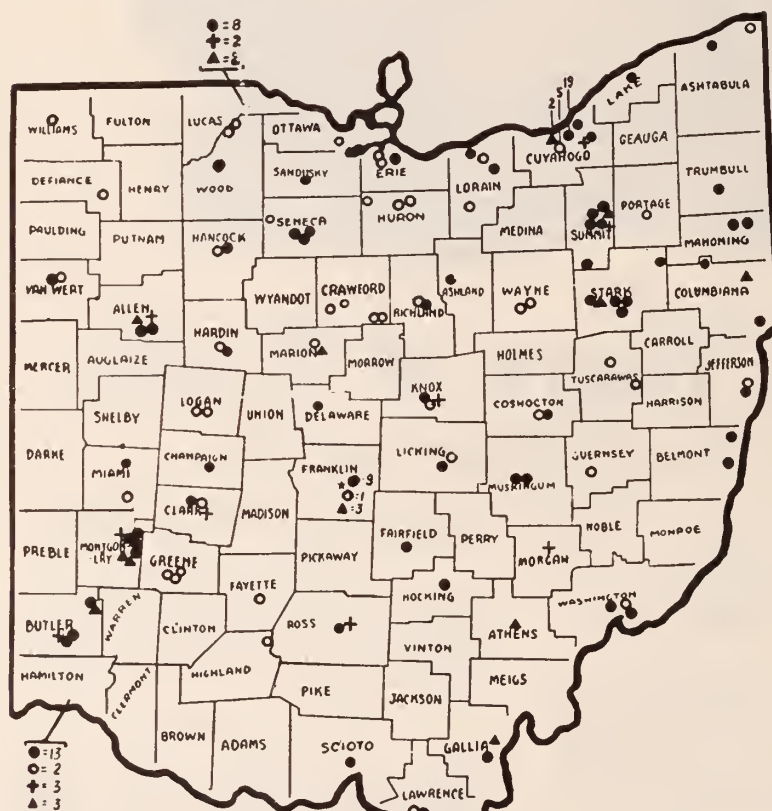
Four factors must be considered in the study of these statistics to determine accurately

whether or not Ohio or any individual community therein has an adequate supply of hospitals. These are (a) the ratio of square miles of area to each hospital; (b) the ratio of hospital beds to population; (c) the percentage of beds on the average in use, and (d) the percentage of counties which have no hospitals.

Table No. 1 of the report indicates that there are a total of 4,012 hospitals for the general care of the sick in the United States, with a total of 307,256 beds—one bed to every 340 persons—and of these beds, 206,024, or 67 per cent., are in daily use. In this table Ohio is credited with 178 general hospitals, having a total of 14,838 beds, of which an average of 66 per cent. are used daily. The ratio of beds to population in Ohio is one bed for every 388 persons.

As an adequate proportion of hospital beds to population, experts estimate a ratio of one bed to every 400 or 500 persons.

In Table No. 2, 33 of Ohio's 88 counties are shown to be without hospital facilities. Forty-six counties have hospitals of over 25 beds, and 9 have hospitals of under 25 beds. Of the 3,027 counties in the forty-eight states, 1,695, or 56 per cent., have no hospitals, indicating an unequal distribution of institutions. If it were not for those hospitals of less than 25 beds there would be 330 more counties without hospitals. Connecticut and New Hampshire are the only states



● General Hospital, over 25 beds.
○ General Hospital, 25 beds or under.

+ Tuberculosis Hospital.
▲ Nervous and Mental Hospital.

Medical Education and Hospitals of the American Medical Association for the year 1920. The report, regarding 6,151 hospitals, sanatoriums and related institutions in the United States, is based on statements from superintendents, directors or other executives of the hospitals. The various state advisory committees, including that of Ohio, assisted in the survey by inspection of many hospitals and the collection of data.

The statistics deal mainly with the most important group of hospitals: the private, general or special hospitals open to the public for the general care of the sick. There are, however,

in which every county has one or more hospitals, while at the other extreme is Georgia, where 81.6 per cent. of its counties are without hospitals. It is noteworthy, however, that Georgia has 152 counties with an average of 386 square miles each as compared with 86 counties in Minnesota, with an average of 940 square miles each.

In Table No. 3, in which hospitals are shown by states in district groups, Ohio ranks second in the list of 12 states included in the North Central division, having a ratio of one hospital to every 229 square miles. Illinois has a ratio of one hospital to every 228 square miles.

Table No. 4 shows the hospital supply for the fifty larger cities in the United States, including the total number of hospitals; the total bed capacity; the ratio of beds to population, and the average number and percentage of beds in use daily. The city most lacking in hospital service, the report shows, is Akron, with only one bed for every 508 people, although only 67 per cent. of the beds are continuously occupied. Youngstown is fourth among cities having a low supply of hospitals, the ratio being one bed to every 311 persons, with 84 per cent. occupied. The latter city and Portland, Oregon, are the cities having the highest percentages of beds in constant use. With only 55 per cent. of its hospital beds in daily use, Toledo has the third lowest percentage.

Data for the seven Ohio cities are as follows: Cleveland—population 796,836, hospitals 23, beds 2,896, ratio beds to population 275; average number beds used daily 1,998, percentage beds used daily 69. Cincinnati—population 401,158, hospitals 17, beds 3,194, ratio beds to population 126, average number beds used daily 2,108, percentage beds used daily 66. Toledo—population 243,164; hospitals 10; beds 994; ratio beds to population 245, average number beds used daily 547, percentage beds used daily 55. Columbus—population 237,031, hospitals 11, beds 1,401, ratio beds to population 169, average number beds used daily 981, percentage beds used daily 70. Akron—population 208,435, hospitals 4, beds 410, ratio beds to population 508, average number beds used daily 275, percentage beds used daily 67. Dayton—population 152,559, hospitals 5, beds 806, ratio beds to population 189, average number beds used daily 621, percentage beds used daily 77. Youngstown—population 132,358, hospitals 2, beds 425, ratio beds to population 311, average number beds used daily 359, percentage beds used daily 84.

According to Table 5, Ohio has 34 hospitals other than those giving general care, with a total bed capacity of 19,061 beds. These include 1 tuberculosis, 27 nervous and mental, and 6 government hospitals, but do not include tuberculosis hospitals handling acute and subacute cases which are listed with general hospitals.

The conclusion of this interesting survey by the Council on Medical Education and Hospitals marks a distinct advance in the understanding of

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the details of the national hospital problem. While many previous surveys of fractional parts of the hospital field have given information on the extent of hospital service in local communities, or of the country-wide extent of certain classes of hospital service, data on all institutions serving hospitals needs have not been available. In conclusion the report expresses the hope that the future will see not only an increase in the general knowledge of hospitals throughout the country, but also a more critical and self-appraising interest of cities, counties and rural communities in the progressive betterment of hospital service.

Narcotic Tax Delinquents Subject to Penalty

A large number of physicians have not yet paid their narcotic tax for the period of July 1, 1921, to June 30, 1922. The tax is \$3.00, with twenty-five per cent. penalty added for delinquency.

In case of a second offense, in addition to being required to pay the special tax with twenty-five per cent. penalty the delinquent will be called upon to render the Internal Revenue Department a written explanation and may be subjected to a specific penalty for engaging in business without filing a return, as required by Regulations 35, Revised.

If physicians have in any way changed their status, removed within or without the district,

discontinued in practice or in using narcotic drugs, their names will be withdrawn from the files upon notification by them, but until such notice is sent they are liable for the tax, according to the Internal Revenue Department, which urges that all delinquents communicate at once with the district office of that department.

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Instructive and Interesting Programs Featured Forward— Looking Sessions of Health Commissioners, Tuberculosis Specialists and Health Workers

Absolute control of tuberculosis in this country in the next decade was predicted by Dr. Walter McNab Miller of St. Louis, president of the Mississippi Valley Conference on Tuberculosis, in his opening address before the conference, which convened in Columbus for its ninth annual session, September 12-14. Approximately 500 delegates from Indiana, Illinois, Michigan, Minnesota, Iowa, Wisconsin, Nebraska, North Dakota, South Dakota, Missouri and Ohio were registered for the conference, one of the largest and most successful in the history of the organization.

At the same time Columbus had two other health conventions in process—the second annual meetings of the Ohio Health Commissioners and the Ohio Public Health Association—and the interchange of speakers and several joint sessions of the three bodies emphasized in graphic manner the mutual problems of official and voluntary health agencies and the possibilities for accomplishment with proper coordination of their work.

Dr. Miller declared that the death rate from tuberculosis had been reduced one-third in the past ten years and predicted that the downward tendency would continue until the disease was under control. He attributed the decline in a large measure to educational work, particularly among school children. Four-minute reports on the declining death rate from tuberculosis in each of the states represented in the conference added weight to Dr. Miller's statements. These reports covered a ten-year period and some indicated that when official statistics for 1921 are available they will show a reduction of 50 per cent. as compared with the figures of ten years ago.

Other speakers of national repute before the general meetings of the conference were Dr. James Alexander Miller of New York, president of the National Tuberculosis Association; Dr. Allen K. Krause of Johns Hopkins University, and Dr. Haven Emerson, former health commissioner of New York City and medical advisor of the Bureau of War Risk Insurance.

Of outstanding importance was the address of Dr. Krause on the subject: "Solving Tuberculosis—A Many Sided Problem." He urged a larger dissemination of knowledge concerning the disease, commended the work of training children in proper health habits and urged more research work. Hospitalization of ex-service men suffering from tuberculosis was the topic discussed by Dr. Emerson.

The various sections of the conference—clinical and pathological, sociological, nurses, and Modern Health Crusade Institute—held well attended meetings with programs devoted to their specialties. Among these none was of greater interest

than the program of the clinical and pathological section, presided over by Dr. Kennon Dunham of Cincinnati and Dr. C. O. Probst of Columbus, as chairman and secretary. Addresses before this section were:

"X-ray Signs of Activity in Pulmonary Tuberculosis", by Dr. A. W. Crane, Kalamazoo, Michigan; "Applied Anatomy of the Lung", by Dr. J. H. Skavlem, of the University of Cincinnati; "The Necessity of Knowing the Normal Physical Signs of the Chest", by Dr. Henry Page, dean of the Medical Department, University of Cincinnati; "Pathology of Pulmonary Tuberculosis as Applied to Physical Diagnosis", Dr. E. L. Opie, professor of Pathology, Washington University Medical School, St. Louis; "Physical Signs of Pulmonary Tuberculosis," by Dr. Alfred Henry, assistant professor of clinical medicine, Indiana University School of medicine, Indianapolis; "Diagnosis of Tuberculous Infection in Apparently Healthy Children", by Dr. O. W. McMichael, associate professor of medicine, Chicago Policlinic; "Artificial Pneumothorax, A Clinical Study," by Dr. Clarence L. Wheaton, Rush Medical College, Chicago; "Therapeutic Pneumothorax in Pulmonary Abscess," by Dr. Herbert M. Rich, assistant professor pediatrics, Detroit College of Medicine and Surgery; "The Significance of the Lung Capacity Test in Pulmonary Tuberculosis, Bronchial Asthma and Pneumonia", by Dr. J. A. Myers, University of Minnesota Medical School, Minneapolis; "Differential Diagnosis of Pulmonary Tuberculosis and Other Affections of the Lungs", by Dr. Casper H. Benson, Columbus; "Home Treatment for the Tuberculous", by Dr. H. A. Pattison, supervisor of Medical Service, National Tuberculosis Association, New York City, and "Public Control of Tuberculosis", by Dr. J. H. Stygall, state clinician, Indiana Tuberculosis Association, Indianapolis.

On the second day of the conference the delegates were taken to Mt. Vernon to inspect the State Tuberculosis Sanatorium. Here the clinical and pathological section and the Mississippi Valley Sanatorium Association, a component organization headed by Dr. William P. Brown of Cleveland, united in presenting a splendid program covering the subjects of "Artificial Pneumothorax," "Contact Tuberculosis" and "Diagnosis of Pulmonary Tuberculosis."

One of the important official steps taken by the conference was the adoption of a resolution seeking to clarify the situation relative to general hospitals opening wards for the treatment of the tuberculous. The resolution declares that there has been a tendency on the part of the public and public officials in some quarters to in-

interpret resolutions recently adopted by the National Tuberculosis Association, the American Medical Association and the American Hospital Association, as indicating that such wards may take the place of sanatoria. Attention was directed to the fact that the real purpose of this policy is that wards in general hospitals are intended in no way to supercede sanatoria, but to supplement sanatoria as clearing houses for diagnosis, for advanced cases, for teaching purposes and for emergency purposes.

At the closing session the conference elected Dr. Robinson Bosworth of St. Paul as president for the coming year. Dr. Robert G. Paterson of Columbus became vice-president and was succeeded in his former position of secretary-treasurer by Dr. Hoyt E. Dearholt of Milwaukee.

* * *

The program of four-day convention of the Ohio health commissioners covered every phase of the health commissioner's duties. The first day was given over to general meetings, addressed by prominent visitors to the Mississippi Valley Tuberculosis Conference and by Dr. W. H. Peters of Cincinnati, president of the city health commissioners' organization, and Dr. D. D. Shira of Akron, president of the general health district commissioners' organization.

Dr. Haven Emerson urged the necessity of thorough medical examinations at regular intervals as vital to disease prevention in any public health program. He declared that education of the public to the need of such examinations constitutes an important part of the health commissioners' work.

In his address on "The Present Status, Progress and Needs of City Health Districts" Dr. Peters condemned as "grossly inappropriate" the present health appropriations in all of the cities of Ohio, each being far less than police and fire protection. "Special privilege," he said, "has filled many a grave in the past, and political expedience should have been listed as a contributory cause of death on thousands of death certificates. However, we now are on the threshold of a new era, and henceforth that which is best for the public health will be the motive in-

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In the trial lasting nearly TWO WEEKS, we succeeded in having the Judge order a directed verdict. This case was fought very bitterly and the plaintiff was represented by two very able and well known attorneys.

I wish to express to you my appreciation of your services. You have furnished everything asked for in each of the trials.

I express also my admiration of the preparation for the trial and the trial itself. The legal talent opposing you was of a high order and the entire case was fought from every angle.

That in the end we should receive a directed verdict is not only a vindication of my treatment but a tribute to your management of the case.

Again thanking you,

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spiring appointments to positions in community health service."

Succeeding days of the convention were occupied with consideration of sanitary engineering problems, communicable diseases, laboratory work, milk supervision, clinics, medical inspection of schools and general child health programs.

The Ohio Public Health Association chose Dr. Clarence D. Selby, former Toledo health commissioner and well known in public health work, as its new president, succeeding Dr. Chester B. Bliss of Sandusky. Robert G. Patterson of Columbus was re-elected executive-secretary. Dr. Selby is a former secretary-treasurer of the Ohio State Medical Association.

The Public Health Association took an active part in the program of the other two bodies and contributed largely to the success of the trio of conventions. Under its auspices, the beautiful health pageant "Health Wins" was given for the pleasure of the visiting delegates.

Red Cross Leaders Mobilize in Columbus for First National Convention

While educational, political and health leaders of the state, nation and the world programmed for the national convention of the American Red Cross at Columbus, October 4-8, will participate in a general discussion of the peace time program of the organization, a series of sectional conferences arranged for October 5, 6 and 7, and a series of luncheon reunions of overseas war workers, October 6, will be given over to specific phases of that program.

Sectional conferences, open to all delegates to the convention, will offer an opportunity for an interchange of views relative to the practical application of the various lines of activity in the society.

On the program for discussion at these conferences will be such topics as "Meeting the Problems of the Mentally Incapacitated and Tubercular Ex-Service Men," by Dr. Thomas A. Salmon, New York City; "What Is Red Cross Service to the Families of Disabled Men?" Mrs. Elbert A. Carpenter, Minneapolis; "Home Hygiene and Care of the Sick in the schools," Mrs. John McMahan, Chicago; "The Challenge of Childhood in America to the Red Cross," Miss Charles Williams, president National Educational Association; "Public Health Nursing from the Point of View of the Health Officer," Dr. Albert D. Tonkin, State Health Officer, Cheyenne, Wyoming, and others.

With such men as President Harding, General John J. Pershing, General Allenby of the British Forces, and Herbert Hoover, Secretary of Commerce, as leading representatives in politics; and such men as Dr. Livingston Farrand, chairman of

the Central Committee of the American Red Cross and president of Cornell; Dr. Henry Noble McCracken, president of Vassar, and Dr. W. O. Thompson, president of Ohio State University, representing the field of education; the medical profession is brought before the audience by such exponents as Dr. William A. Evans, formerly president American Medical Association, and Dr. C. E. A. Winslow, general medical director of the League of Red Cross Societies.

Miss Alice Fitzgerald, director of nursing in the League of Red Cross Societies, Switzerland, is scheduled for an address at the reunion of nurses, October 6, and an address on the Foreign Service Program that afternoon. Miss Fitzgerald was decorated by the Italian government for her services in 1918 and by the King of England at Buckingham Palace with the British Royal Red Cross for her services as an Edith Cavell Nurse with the British Expeditionary Forces.

Miss Lillian Wald, head of the Henry Street Settlement in New York, and organizer of the public health nurse, and Clara D. Noyes, director of nursing American Red Cross, have a place on the regular program.

In addition, Edward R. Stitt, surgeon general of the United States Navy, and Merritte W. Ireland, Surgeon General of the United States Army, who are also members of the executive committee of the American Red Cross, have been invited and are expected to be present for addresses at the convention

Sage Sayings by Walt Mason

"There's always something more to learn, however much we wot of now; important truths, that throb and burn, man ought to store behind his brow. Physicians dwell in every town whose unused minds have gone to seed; they turn the helpful journals down, they do not study, think, or read. They have diplomas on the wall; what more could any patient wish? They wait for the infrequent call, and sigh, 'Dad blame it!' or 'Odsfish!' And there are lawyers on our street who quit their studies long ago; in fourth-rate courtrooms they repeat the few moth-eaten things they know. The doctors who are winning fame, the lawyers who are coming dust, know well that in life's busy game none can afford to carry rust. The things we learned in days of old will make a base, the seers relate, on which to rear a structure bold of knowledge fresh and up-to-date. The men who think they know enough will cut but little grass below; they'll always find the sledding tough, and few to mourn them when they go. No man can know so much, in sooth, he shouldn't to his books return; there's always room for one more truth, there's always something more to learn."

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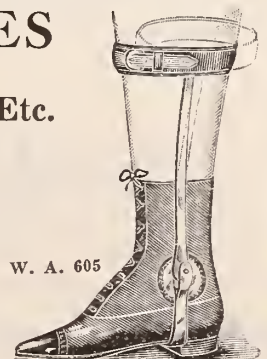
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DEATHS IN OHIO

Jacob Edward Berry, M. D., Starling Medical College, Columbus, 1898; aged 47; died in Ohio Valley General Hospital, Wheeling, August 7. Dr. Berry's home was at Clarington. He leaves his widow, one sister and two brothers, one of whom is Dr. J. C. Berry of Shadyside.

William Horton Blake, M. D., Starling Medical College, Columbus, 1870; aged 75; died, August 16, in Grant Hospital, Columbus, following an operation for appendicitis. Dr. Blake practiced in Shadyside for fifty years. He was a veteran of the Civil War. Surviving are his widow, two sons, daughter and three brothers, two of whom are Drs. H. C. Blake of Lockbourne, Ohio, and C. F. Blake of Baltimore, Maryland.

Samuel Coopersmith, M. D., Western Reserve University, School of Medicine, Cleveland, 1920; aged 33; died in Canton, August 16. Dr. Coopersmith was chemist for the city health department at the time of his death and formerly served as chemist at Mercy Hospital, Canton.

Clinton H. Coy, M. D., College of Physicians and Surgeons, Baltimore, 1888; aged 66; former member of the Ohio State Medical Association;

died at his home in Napoleon, August 9, after an illness of three months.

Franklin Henry Darby, M. D., Medical College of Ohio, Cincinnati, 1875; aged 75; member of the Ohio State Medical Association and Fellow of the American Medical Association; died of paralysis, August 29, at his home in Columbus. Dr. Darby came to Columbus 30 years ago from Vinton County, where he had practiced medicine 20 years. For 28 years he was superintendent of the Children's Home Society of Ohio, an office which he held at the time of his death. He leaves one daughter and two sons.

Albert G. Henry, M. D., Columbus Medical College, 1881; aged 72; member of the Ohio State Medical Association; died at his home in North Baltimore, August 29, after a short illness. Dr. Henry was extensively interested in civil and industrial enterprises, being credited with building the town's first electric light plant, theater and drug store. He was president of the Sycamore Oil and Gas Company.

Harold Hill Jacobs, B. S., M. D., Medical College of Ohio, Cincinnati, 1891; aged 55; member of the Ohio State Medical Association; died at the People's Hospital, Akron, August 31, from nephritis and heart disease. At the time of his death Dr. Jacobs was connected with the staffs of the City, Children's and People's Hospitals.

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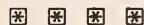


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He was one of the founders of the latter institution. For 23 years he was a member of the Summit County Medical Society, and in 1917 served as president of that organization. Surviving are his widow and three daughters.

Alexander Mitchell Loewenstein, M. D., Albany Medical College, 1908; aged 36; member of the Medical Society of the State of New York and Fellow of the American Medical Association; died at his home in Cleveland, August 10, of encephalitis. During the late war Dr. Loewenstein served as a captain in the sanitary corps in Russia. He leaves his wife and one daughter.

Finley Bachtel Richards, M. D., Medical College of Ohio, Cincinnati, 1879; aged 69; member of the Ohio State Medical Society; died at his home in Uniontown, Stark County, August 23, from cancer of the liver. Dr. Richards was born in Uniontown.

John Sadler, M. D., Western Reserve University School of Medicine, 1869; aged 77; died, August 6, of arteriosclerosis at his home in Columbus. Dr. Sadler was a practitioner in Columbus for over half a century. In the Civil War he served as a member of the 105th Ohio Volunteer Infantry and at one time was surgeon-general of the G. A. R. for Ohio. He is survived by one daughter, one sister and one brother.

George J. Zuebelen, licensed to practice in Ohio, 1896; aged 84; died, August 8, at St. Elizabeth's Hospital, Dayton, from bronchopneumonia. He leaves four daughters.

Ora Lee Norris, M. D., Detroit College of Medicine and Surgery, 1895; aged 50; member of the Ohio State Medical Association; was instantly killed, when his machine was struck by a traction car, September 11, while making a professional call two blocks from his home in Deshler. Dr. Norris has been a valuable worker in medical organization and at the time of his death was president of the Henry County Medical Society. Those who knew him personally and professionally will mourn his loss. During the war Dr. Norris saw service overseas as a major in the 32nd Michigan Division. He leaves a widow and two children.

Stephen Cooper Ayres, M. D., Medical College of Ohio, Cincinnati; 1864; aged 79; former member of the Ohio State Medical Association; died at his home in Cincinnati, September 2, after an illness of four months. Dr. Ayres was a veteran of the Civil War and was prominent in G. A. R. affairs for many years. He served at various times on the staffs of the Cincinnati Hospital, St. Marys Hospital, the Protestant Episcopal Hospital for Children, and taught in the Medical College of Ohio, now part of the University of Cincinnati, until a few years ago. Surviving are his widow, two daughters and two sons, one of whom is Dr. Wylie McLean Ayres of Cincinnati.

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RHEUMATISM

Second District Post-Graduate Course Well Attended

The annual meeting of the Second Councilor District, in the form of a series of post-graduate lectures covering the period from September 19 to 23, inclusive, "went through" with its usual large measure of success, drawing not only a splendid attendance from the Second District but from the profession in other parts of the state.

The interesting program included a wide range of subjects. Scientific lectures were given throughout the five-day session from nine o'clock in the morning to four in the afternoon, there being two speakers for each day with the exception of one, when Dr. Martin H. Fischer of Cincinnati held the platform for the entire day. The banquet and business session, on the evening of September 22, was a thoroughly enjoyable affair, featured by an address on "Short Cuts Into Medicine" by Judge R. M. Wanamaker of the Supreme Court of Ohio. The complete list of speakers and their topics follows:

SEPTEMBER 19

Dr. W. A. Steel.....Philadelphia
Dr. J. O. Arnold.....Philadelphia
9-10—Gangrene, General Consideration,

Dr. Steel

10-11—Effective Measures in the Prophylaxis of the Early and Late Toxemias of Pregnancy Dr. Arnold

11-12—Gangrene—Treatment Dr. Steel

1- 2—Practical Methods for the Conservation of the Maternal Energies in Labor, and Their Results.....Dr. Arnold

2- 3—Internal Drainage of the Gall Bladder,

Dr. Steel

3- 4—Better Methods in the Immediate Attentions to the New Born.....Dr. Arnold

SEPTEMBER 20

Dr. Charles J. Whalen.....Chicago

Dr. James F. Rooney.....Albany

9-10—Whither are We Drifting?.....Dr. Whalen

10-11—Social Tendencies and the Medical Profession Dr. Rooney

11-12—Evolution in Medical Practice, and What Ails the Medical Profession.....Dr. Whalen

1- 2—Tendencies in the Medical Profession,

Dr. Rooney

2- 3—Former Lecture Continued.....Dr. Whalen

3- 4—Compulsory Health Insurance and State Medicine Dr. Rooney

SEPTEMBER 21

Dr. J. T. Geraghty.....Baltimore

Dr. K. D. Blackfan.....Cincinnati

9-10—Diagnosis and Treatment of Chronic Urethritis Dr. Geraghty

10-11—The Clinical Manifestations of Hypersensitiveness to Protein in Children,

Dr. Blackfan

11-12—Diagnosis and Treatment of Non-gonorrheal Infections of Upper and Lower Urinary Tract.....Dr. Geraghty

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Progress of Science to be Depicted by Exhibits at the Cincinnati Health Exposition

One of the outstanding features of the Cincinnati Health Exposition, to be held in Music Hall, October 15 to 22, will be Rural Sanitation Day, which will bring to Cincinnati a notable gathering from farming communities throughout the Ohio valley. With the co-operation of the District Board of Health, a program of special interest to farmers and their families has been prepared and many attractions of vital importance to those who live in rural communities will be displayed. A series of lectures and exhibits will show how the individual home, farm and community can safeguard health.

Among the features that the Board of Health will exhibit are a laboratory for testing drinking water and two models showing a sanitary and an unsanitary well. A model milk station in a rural community showing how milk can be handled properly will also occupy some of the space.

The joint exhibit of the nurses' training schools will show a class room in the school of nursing and health and a demonstration in bandaging, bathing and care of the sick.

Once space unit will be devoted to a demonstration of the work of the Red Cross county nurses.

A wrecked automobile showing how motor acci-

dents are caused and how they can be prevented will be displayed by the safety council of the Chamber of Commerce and the council has also arranged to have some of Cincinnati's best traffic policemen on duty at its booth to answer questions on traffic regulations and safe driving.

The medical division of the Board of Health will have the complete equipment of a school physician's office with a doctor and nurse in attendance to examine children attending the exposition. The joint exhibit will consist of an X-ray room, private room, operating room, children's department, dietetic department and handicraft department. Demonstrations of the work actually carried out in Cincinnati's hospitals will be given by surgeons.

With the notable array of nationally prominent speakers as well as the interesting program of educational moving pictures, pageants and displays, the daily features which will take place in the auditorium of Music Hall during the seven days and nights of the exposition will be of considerable interest to out-of-town visitors to the exposition.

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- 1 Dust Proof Triple Nose-Piece
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- 1 Objective, 4mm
- 1 Objective, 1.8mm, Oil Immersion
- 1 Substage Condenser
- 1 Set Stage Clips
- 1 Concave Mirror
- 1 Blue Glass Disc
- 1 Frosted Glass Disc
- 1 Metal Disc
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- 12 Assorted Test Tubes
- 1 Test Tube Brush
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- 50 Micro Cover Glasses
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- 1 Glass Funnel
- 1 Evaporating Dish
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- 1 Blood Lancet
- 1 Book red Litmus Paper
- 1 Book blue Litmus Paper
- 1 Package Slide Labels
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all having a definite bearing on health matters, will also be shown. No commercial exhibit will be allowed by the exposition committee unless it shows some article that has been approved by the health authorities.

Among the prominent health experts who will be present during the exhibition week are Dr. Royal S. Copeland, Health Commissioner of New York City; Dr. Harvey Wiley, Director of the Bureau of Food, Sanitation and Health, who will speak on "Food and Food Values"; Dr. Woods Hutchinson; Dr. David Lyman; Dr. Frankwood E. Williams of the National Committee on Mental Hygiene; and Dr. C. L. Lumsden of the United States Public Health Service.

An interesting account of the work accomplished by the American Relief Commission in combatting the spread of typhus in Poland will be given by Colonel Harry L. Gilchrist of the United States Army, who has just returned from that country. In addition to the speakers and educational features a pageant in which more than 500 Cincinnati school children will appear, is being prepared and will be given at two performances.

Occupational Diseases

The method of procedure and the forms for reports in establishing claims under the occupational disease amendments to the Workmen's Compensation Law, have been delayed by the Industrial Commission awaiting the attorney general's interpretation of some of the legal requirements. The first cases so far reported under the new law have been limited to cases of so-called "occupational dermatitis," which, however, is not specifically mentioned in the law. The Industrial Commission is expected within the near future to determine whether or not these claims are compensable.

The question of whether or not the report of the discovery by a physician of any occupational disease must be made both to the Industrial Commission and to the State Department of Health, or whether such report can be made to a central bureau agreed upon by both state departments, is now before the attorney general. All state officials in any way concerned with the administration of the new law have pledged themselves to eliminate as far as possible all unnecessary formality and red tape. Forms for reporting and other information will be mailed to physicians as soon as final decision is made by the Commission.

For complete information on the law and the present situation you are referred to page 604 of the September *Journal*; page 531 of the August issue, and page 487 of the July number.

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But permit it to over-exert, by a failure to know accurately the pressure under which it labors, and it is apt to prove that it is very human by simply ceasing to function.

Reason enough why the finest minds in the profession of medicine are refusing to accept "easiest-way-diagnosis." Reason enough if there were not a myriad others, why each succeeding Convention sees additional stress laid on the importance of the subject.

Reason enough, too, why "best practice" is coming more and more to emphasize the necessity of accuracy and consistency in bloodpressure readings.

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NEWS NOTES OF OHIO

Portsmouth—Dr. T. C. Crawford, formerly a resident of West Union, is now engaged in general practice in this city.

Washington C. H.—Dr. Claude C. Crum of Jeffersonville, Indiana, took over the practice of Dr. H. L. Stitt, September 12. The latter will locate in Cincinnati as an associate of Dr. William Mitchofer on completion of a post-graduate course in New York. Dr. Crum served assignments during the late war at Fort McHenry, Camp Grant, and abroad, ranking as a major.

Massillon—Dr. Chester E. James has resigned as assistant superintendent at the State Hospital, a position he has held for ten years.

Hicksville—Dr. Sherman Cook, for 15 years a resident of this village and president of the De-fiance County Health Board, has disposed of his practice and office to Dr. W. C. DeMuth of Cecil.

Columbus—The sixteenth annual picnic of the General Practitioners Medical Society was held in Worthington, August 25.

Blanchester—Dr. Robert Conard has become head of a hospital at the National Home in Milwaukee. Dr. Conrad for a time held the position of county health commissioner.

Fostoria—Dr. George L. Hoege was recently the guest of honor at a banquet given by the Knights Templar on the occasion of his retirement from practice and departure for the South.

London—When Dr. W. F. Smeltzer terminates his local residence, November 1, he will go to Cleveland to associate himself with the Cleveland Clinic.

Lorain—Dr. W. E. Wheatley, for years consulting surgeon for the National Tube Company, this city, has resigned to devote his entire time to private practice. Dr. D. D. Grimm, company physician, has been advanced to Dr. Wheatley's post, and Dr. George Blank, Greensburg, Pennsylvania, has been added to the staff to assume Dr. Grimm's former duties.

Columbus—After spending the summer at Camp Pemigewassett, Wentworth, New Hampshire, Dr. J. H. Nichols has resumed his work in the department of physical education at Ohio State University.

Cleveland—Former members of Base Hospital No. 67, U. S. Army, held their second annual meeting here, September 3-5. The unit was stationed at Mesves, France, during the war, and more than half of the membership live in Ohio.

Painesville—Dr. E. S. Jones has been appointed pension examiner for Lake County. Dr. Jones has been an examiner for the War Risk Insurance Bureau since his discharge from Army duty.

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Silver-Salvarsan requires no alkalization and its ease of administration commends it to many practitioners.

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CLOSE PERSONAL ATTENTION IS THE MOTTO OF THE INSTITUTION.

Success in the treatment depends upon the stage of the disease at which the patient is admitted to the institution. The sanatorium acts as a "school" where patients are taught to live properly and to protect others. They also learn the value of rest. By giving your patient a short period of "schooling" he will be better prepared to follow instructions and will have increased his chances of arrestment of his disease.

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MEDICAL ECONOMICS

PUBLIC HEALTH ~ SOCIAL WELFARE *and* ORGANIZATION PROBLEMS
WITH EDITORIAL COMMENT *by* D. K. M.

Malpractice and Medical Defense

The constant increase in the number of malpractice, suits, filed and threatened has created a situation of great concern, not only from the professional but from the economic and the legal aspect.

As repeatedly stated, a suit against any individual physician, on the alleged ground of malpractice, is a reflection on and a detriment to all other members of the profession. The present unsettled economic status and disturbed social conditions are accompanied by an abnormal and unwholesome attitude of mind on the part of some individuals, and some lawyers, which is manifest toward the medical profession in that they consider the physician fair "game" for extortion.

Unfounded as most malpractice claims are, the aggrieved patient often encouraged by an unscrupulous lawyer and by unthinking doctors, attempts to secure a settlement from a physician, knowing that in many instances such settlement will be made to avoid a publicity, always annoying, and too often damaging, in spite of the justice of the defendant doctor's position in the particular case.

In this issue of *The Journal* are published the papers comprising the symposium on fractures, delivered at the last annual meeting. Of unusual interest is the one by Attorney Eastman on page 739 in which is set forth concisely the definition of malpractice, the legal obligations of a physician in the treatment of any case, the degree of care and skill required, the duty of the physician to his patient, and the relation of the statute of limitations to malpractice claims.

The author of the paper is a member of the legal firm employed by the Association for the defense of malpractice suits against members not otherwise protected by indemnity insurance.

While it is not the purpose of the Association's defense committee to defend cases of wilful negligence or malfeasance, the united influence of organization, and the realization by each member of the seriousness of thoughtless or unfair comments regarding a case treated by a fellow practitioner, can prevent the inception of innumerable unfounded claims.

There are, unfortunately, a few casualty companies in the field who have done more to encourage malpractice cases than all the ambulance chasing lawyers put together. This they have

done by paying amounts in settlement in cases on which others engaged in defending malpractice suits consider money absolutely thrown away. Exorbitant amounts are paid in cases in which nothing at all should have been paid, in which in fact, no liability existed.

The boast has been made by a lawyer bringing malpractice cases against one of the casualty company defenders that he filed his suits in the summer and purposely held them off so that he might bring as many as possible during the summer season relying upon the casualty company's strong desire to "clean up cases" in the autumn and early winter, so as to reduce their insurance reserve with the state. In cases where a reserve of \$2,000.00 is held, ten cases would put \$20,000 into the reserve fund of the company and if it could release this sum of money by paying \$1,500.00 or \$2,000.00, to dispose of ten cases, it would by that much help its showing with the Insurance Department. A scramble occurs every fall and winter to settle cases which can be closed for a small sum of money. The fact that the liability in the cases is non-existent or negligible is a matter of secondary consideration. In justice to those engaged in this line of business, it is to be said that such handling is not a universal practice among these insurance companies or casualty companies. But there are a few companies who are grave offenders.

Apropos this situation, the attorney for one of the state medical associations, recently said:

"Ordinarily, if a person seeking insurance made inquiry and found that one insuring company charged double, more or less, what others charged for an indemnity contract, he would naturally assume that the one charging the larger price must have advantages for which it charged and could assume that the coverage by the company charging the lesser figure, was less valuable or that its financial responsibility was gravely less, or that some contingency increasing the premium must exist as to the one charging the smaller figure, such as a possible assessment, etc. This rule, which would ordinarily be invoked, is entirely inapplicable to the securing of malpractice insurance.

"The companies who charge very large fees are either making an exorbitant profit on the business, or they are *not* handling the cases to the best advantage. The fact that certain insurers

handle malpractice indemnity contracts at one-half to one-third that charged by others is owing to the fact that they give skillful and careful attention to their business and do not settle utterly baseless claims. It is to be hoped that physicians will consult their own interest in taking malpractice insurance and if a real discriminating judgment on their part, results in driving out of the field some of the casualty companies which have made the pathway of the defenders of the medical profession difficult, it will be a matter of unalloyed joy to those who are seeking to have claims against physicians handled upon the only basis on which they ought ever to be considered, namely, on their merits. They should be settled or defended as liability does or does not exist, without any reference to insurance reserves or reducing the number of suits on the docket and like grounds which, even if material to the insurer, go counter to the interests of the assured. A safe question to propound to any solicitor of malpractice insurance is to ask him the cost of defense of suits. If he puts the cost at \$2,000.00 to \$3,000.00 per case, you may rest assured that he is using very poor judgment in underwriting and selecting only hazardous risks, *or he has a very deficient loss department which is not handling cases to advantage.*"

As succinctly stated in the words of Dr. J. E. Tuckerman, Cleveland, chairman of the Committee on Medical Defense, the purposes of the State Association's defense are:

The Ohio State Association's medical defense is for the sole purpose of defending its members against malpractice suits; to make the practice of filling malpractice suits unpopular and unprofitable.

It is the business of the Ohio State Association's medical defense to provide that members *protected* by indemnity insurance are given every assistance that they may be adequately defended by the insuring companies, and that the insuring companies be encouraged to fight and not to settle.

It is the business of the Ohio State Association's medical defense to provide that members *not* protected by indemnity insurance are adequately defended. Its business is to fight, not to settle.

Economical Results in Terms of Physical Products

Of direct interest to every physician in Ohio is the comprehensive report and recommendations formulated by the outgoing Board of Administration and submitted to the governor as a policy for the supervision of the state institutions under the newly created State Department of Welfare in relation to the medical and physical programs for the thousands of state wards.

This comprehensive report not only contemplates the extension of medical and curative work for the wards of the state, but the inauguration

of a well-considered program of prevention designed to reduce the amount of insanity, feeble-mindedness and crime.

It is the belief of those who formulated the report that the future progress and development of Ohio's score of state institutions caring for 25,000 wards depends on a constructive, definite and practical program to be administered with wisdom, foresight and good judgment. In terms of product, the report recommends a greater degree of medical service with the proper classification of state wards before they are placed or segregated, with the purpose of utilizing the physical efforts of all those able to work, and to make available the best possible medical service to hundreds of curative cases most of which now only have routine custodial care.

While the present legislature made available for the state institutions a larger biennial budget than heretofore, it is pointed out by the report that the first step in the constructive program must be the availability of a special fund of \$320,000 per annum for the purpose of improving the character of the personal service throughout the institutions. It was understood when this fund was appropriated that it would not be distributed pro-rata among the officers and employes regardless of efficiency, but would be used to reward the efficient and to increase the staff personnel and the quality of service rendered.

It has previously been pointed out in these columns that the meagre and inadequate salaries paid by the state to the medical assistants in the state institutions was a pitiable measure of regard which the commonwealth has for medical service to its wards. Every physician is interested in a more equitable adjustment by the state through the Department of Welfare in the administration of the state institutions as contemplated in the report of the State Board of Administration.

Based on a false idea of economy the State Board of Control has been reluctant to release for the use of the State Department of Welfare the special fund above referred to. Proper sentiment must be created and made known to the state officials who comprise the Board of Control. These are the Governor, ex-officio, the Auditor of State, the Attorney General, and the chairmen of Finance Committees in the State Senate and the House of Representatives.

A more complete analysis of this unique and constructive report just completed for transmission to the Governor, is made on page 769 of this issue.

In Re Wine Prescriptions

An opinion submitted on October 11 by the Attorney General of Ohio to the prohibition commissioner is interesting as an interpretation to the McCoy anti-wine and beer bill, passed by the general assembly. In substance the ruling holds that sherry wine may be prescribed provided all

the requirements of the federal regulations and state laws are complied with.

It will be remembered that as originally drawn, the bill contained the ridiculous provision compelling all physicians to secure federal liquor permits in order to prescribe any drugs containing alcohol. An amendment was secured, however, eliminating this extremely objectionable feature. The purpose of the bill as finally enacted was to limit such prescriptions to pure grain or ethyl alcohol or spirituous liquors in quantities of one-half pint in any period of ten days, for the aged, infirm and known sick. Alcoholic medicinal preparations named by the federal prohibition commissioner and held to be fit for beverage purposes, and listed in the U. S. P. and N. F. were exempted from the operation of the law and permitted to be manufactured, prescribed and dispensed for medicinal purposes by those conforming to the federal regulations, under permits issued for such purpose.

In the opinion of the Attorney General, it is held that the intent of the act to limit a physician's prescription to distilled liquors as contradistinguished from alcoholic compounds produced by fermentation excepts those medicinal preparations fit for beverages which are listed in the National Formulary.

After quoting the definition of sherry wine from the fourth edition of the National Formulary, the Attorney General in his opinion says:

"It will be observed from the above definition that sherry wine is neither distinctly a distilled spirit nor a fermented liquor, but rather is a compound of both distilled and fermented liquors. It is officially listed in the United States Pharmacopoeia as an alcoholic medicinal preparation, and therefore the only question now presented is whether or not this preparation has been named by the federal prohibition commissioner as being fit for beverage purposes under the provisions of section 6212-15a G. C."

He holds further that in considering the above definition (quoting from the regulations of the federal prohibition commissioner) as to the requirements of the medicinal preparations unfit for beverage purposes and the definition as given by the National Formulary of sherry wine, it would seem quite clear that the prohibition commissioner has declared sherry wine to be an intoxicating liquor fit for beverage purposes, even though it is not specifically enumerated under the provisions of Article XI. The general rule is given, which when applied, necessarily places sherry wine within the class of medicinal preparations fit for beverage purposes. However, this department has recently been further advised in a communication from Hon. Roy A. Haynes, Federal Prohibition Commissioner, as follows: 'Sherry wine is a potable intoxicating liquor fit for use as a beverage and under the National Prohibition Act it may be prescribed by a physician for medicinal purposes.'

In summarizing his opinion which thus exempts sherry wine from the preparations excluded from use under the latest Ohio laws, the Attorney General holds:

"(1) Under the provisions of section 6212-15a G. C. (McCoy bill above referred to), a physician duly qualified as such under the national prohibition act, may within the limitations of the federal and state prohibition laws prescribe alcoholic medicinal preparations listed in the United States Pharmacopoeia or National Formulary when held by the prohibition commissioner to be fit for beverage purposes.

(2) Druggists who have properly qualified to use and dispense intoxicating liquors under the national prohibition act may within the limitations of the national and state prohibition acts use and dispense alcoholic medicinal preparations listed in the National Formulary when held by the prohibition commissioner to be fit for beverage purposes.

(3) Sherry wine is an alcoholic compound listed in the United States Pharmacopoeia and National Formulary as a medicinal preparation, and has been held by the prohibition commissioner to be fit for beverage purposes."

Tuberculosis Clinics

Quite a number of county medical societies and local academies of medicine have already indicated their interest in the group tuberculosis clinics which are being arranged by the State Department of Health, with the cooperation of the Ohio Public Health Association, the Ohio State Tuberculosis Sanatorium, and the Ohio State Medical Association.

This program is expected to include between thirty and forty clinics throughout the state during the winter. The plans are being formulated entirely along educational lines conforming to preliminary recommendations just completed by the outgoing State Board of Administration, for a greater utilization of the tuberculosis sanatorium as a training school for the medical and nursing professions in the care and treatment of tuberculosis, and as the central medium in a state-wide educational program.

The first aim of the State Department of Health in arranging for the clinics is to assist local physicians in the diagnosis of early or suspected cases, and to create in the minds of the public a greater confidence in their local medical service to deal with the problem, not only of incidental cases, but of its relation to the community as a health measure.

It is not the purpose of these clinics to treat or recommend a course of treatment to the patients examined, but to refer them back to their own physicians.

A number of chest specialists have volunteered their service to attend the various clinics, of which is expected to last on an average of

days. The cooperation of physicians is requested and the diagnostician's findings and recommendations will be analyzed in detail and furnished to each patient's physician.

It is expected that these clinics will discover a large number of early and suspected cases and that corroboration by the special diagnostician will secure additional benefits in proper care and treatment.

The schedule for the various meetings will be announced from time to time by the State Department of Health through the local health commissioners and the officers of county societies.

In Terms of the Public

Portraying a vivid picture of political confusion and economic prostration in practically all the foreign countries, Dr. Livingston Farrand, the retiring president of the American Red Cross at its recent convention in Columbus, declared that the most serious public question at the present time is that of *human vitality*.

Dr. Farrand pointed to the situation, with eight million lives suddenly wiped out by the world war. Even more serious he said was the infiltration behind the lines due to disease and malnutrition.

Profoundly disturbing as he sees it is a coming generation of children undernourished, over-nervous, and subnormal—this coming generation, the product of the present eleven million war orphans, under-fed during recent years to the point of disease.

That this country is directly and vitally concerned he emphasizes on the basis that civilization itself must rest on the coming generation of under-developed. He calls for a direct facing of the situation and declares that when disaster and collapse impends in Europe and elsewhere throughout the world that this nation cannot help but be involved, and that America at the present time is the only powerful nation approaching normal that can bear the brunt of this vital problem.

That the democracy of this nation is under trial is Dr. Farrand's conviction and that we must all think in world terms if we expect civilization to continue. Among his high points were:

"Our tendency has been to turn our back on war conditions which we dare not ignore."

"We are of the world whether we will or not."

"We must participate whether we will or not."

"We had thought civilization deep-rooted, built on a substantial foundation, sunk in the ages, that could not be torn up, but we see that it can and has been wiped away over night."

"Certain influences are growing which compels civilization of our day to fight for its life."

If we are to solve present problems, future developments must be taken into consideration and if human vitality is the fundamental problem, then the medical profession has the primary burden not only in the health of the people of

America, but in the perpetuation of civilization. Whether or not this analogy is over-drawn the fact remains that the medical profession as a group if its service to itself and to the public is to be maintained and advanced, must think not alone in medical terms, but in broader "public terms"—economic, social and political.

Quarantine Violations

The State Department of Health through local authorities in view of the prevalence of diphtheria in many parts of the state, has found it necessary to enforce the law against violations of quarantine and the removal or destruction of contagious disease cards. Special attention is called by the State Department of Health to the penalty for the infraction of these necessary laws.

In one Ohio city a heavy fine was imposed for destruction of a card posted on a residence, and in another city where more than 200 cases of diphtheria were found, violations of quarantine were so numerous that the local police department was called upon to insist on the proper enforcement of the law.

At this time when there are so many organized efforts to obstruct the administration of public health measures by the uninformed and hostilely prejudiced, when anti-vaccination and so-called anti-medical organizations are ignorantly opposing those measures for public protection, the attitude of the medical profession in supporting law enforcement, based on scientific principles so well established, will constitute an effective rebuke to those who ignorantly or viciously belittle the value of anti-diphtheretic treatment and other medical measures for public protection.

Doubtful satisfaction indeed must be the lot of anyone who presumed to know better and being in position to speak with authority and influence, aids and abets, through his utterances—wilfully false and viciously halftrue, the ignorant though organized opponents of compulsory vaccination who have based state-wide propaganda on the following inconsistencies: (1) Adults are just as susceptible to smallpox and there are no vaccination laws applying to them. (2) Many parents have delicate children and are conscientious objectors for that reason. (3) Many people do not believe in the efficacy of vaccination under any circumstances. (4) The expense of vaccination and subsequent illness is often a serious burden to the parents. (5) That the proper way to prevent the spread of smallpox or any contagious disease is to teach the need of cleanliness.

State Medicine

State ownership and control, sound in theory, has proved itself wholly unsound in practice. There may be countries in the world where it is safe to trust the control of vital interests to the group of men who comprise the government; it

(Continued on page 774)

Fractures from a Surgical Standpoint

ROBERT CAROTHERS, M.D., F. A. C. S., Cincinnati

Editor's Note.—Dr. Carothers considers that the following are the four cardinal steps in the surgical treatment of a fracture. (1) Appose the contiguous ends of the fractured bone; (2) retain apposition until natural repair can do so; (3) study the patient and nurse or treat him during the process of repair; (4) restore the injured part to function after repair has taken place.

The early setting of fractures obviates many difficulties. A good plaster of Paris technique is invaluable for retention in spite of the advertised superiority of many old and new types of splints. Ambulatory treatment is indicated in all cases in which it can be used safely and with advantage to the patient. All possible means should be used not only to maintain and better the health of the patient during treatment but passive and active motion, massage, mechano-therapy and other means should be utilized to give the patient as normally functioning a part after repair as existed previous to injury.

ONE of the most essential things for success in the treatment of a fracture is a correct understanding or diagnosis of the fracture. This is acquired by a careful physical examination of the case and above all things, an X-ray confirmation of the same. In the light of our present knowledge, it is not fair for the patient, the doctor or society to trust entirely to one without the assistance of the other in each and every case.

EARLY SETTING OF FRACTURES

Given a fracture for treatment, the first thing to be done is to appose the contiguous ends of the fractured bones,—the so-called setting. The best time for this to be done is just as soon after the receipt of the injury as opportunity will permit and good judgment directs. Other things being equal, there is a decided advantage in making an early adjustment or reduction of a fracture, since it is, at that time, much easier of accomplishment and renders the after-treatment much simpler. In a compound fracture this is especially true, since there is an additional surgical condition to be met—*infection*—which is a busy-body, growing hourly in severity. Sometimes a severe shock indicates a delay in reduction and is entitled to first consideration.

A few fractures are easily adjusted or naturally adjust themselves—the fibula or lower ulna belong to that class. Others are adjusted quite satisfactorily by manipulation along definite lines. A Colles or neck of the thigh fracture may be so styled. In a fractured long bone, where there is much over-riding, an adjustment is made with difficulty by traction either done rapidly on a Hawley table or slowly in a Thomas splint with a Sinclair foot adjustment. The latter is a very desirable method for first aid where a person is to be transported any distance. *There is a rule in fractured long bones, to make the lower fragment meet the upper. This seldom, if ever, is to be discarded.* The Hodgkin splint, in some localities quite popular, makes an excellent method for adjustment of fractures of the lower ex-

trémities. The ice tongs or calipers with traction, an improvement on the old Buck's extension, is still in use in a limited number of cases.

These methods, which are each at times desirable, have been superseded in the last few years by the Thomas splint, which has been proved more practical and serviceable.

OPERATIVE REDUCTION

If, perchance, one is unable to reduce a fracture in any other way, and the proper hospital environment and operative technique is available, operative surgery is permissible. A deformed or mal-union—excessive shortening—improper weight bearing or any abnormal condition as the end result in a fractured bone is much to be regretted and any method is justifiable to prevent it, if no greater harm or risk is given the patient. The open method has much to commend it. It insures the best coaptation of the fragments in many cases, otherwise impossible of adjustment. A fracture of both bones of the forearm might illustrate this point. It presents an opportunity to clean out a blood clot which has undoubtedly been proved to delay union and also correct any complications present. A dry field in soft tissue insures a more rapid repair; the same is true in bone. (Sir Robert Jones).

The foregoing ideas are with the extremities in mind and not fractures of the skull or spine which are operative by choice, if not compulsion. The contained viscera, which is so vital and so easily damaged, is given first consideration.

The *compound fracture* is a surgical case and is to be treated as such with the same importance one would consider an acute appendicitis. Always infected, usually comminuted and frequently complicated. As soon as it is possible to do so, these cases should be removed to a hospital operating room and with the same skill and care used in opening an abdomen, they should be opened up, cleaned out, all dead and infected tissue removed and then closed up tight and treated as a simple fracture. The acute appendix removed tonight may not be the gangrenous, ruptured appendix removed tomorrow. Time means much in the treatment of compound fractures and when given the best treatment possible, many an

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osteomyelitis or lost life or limb may be obviated.

VALUE OF RADIOGRAPHY IN FRACTURE TREATMENT

The use of the X-ray in the adjustment of fractures is not only of great assistance, but is really vital to success in most cases. In this day a man would be unwise to treat a fractured bone without X-ray confirmation, unless it was impossible to do so and even then, a release of responsibility would be advisable.

Very ingenious and practical fluoroscopic devices are available, so that one can actually see the bones which are being manipulated into place. If this is not possible, an X-ray plate to check up, confirm or disprove a correct apposition, should be made in each case.

During the course of repair it is not inadvisable to study the progress of the case by X-ray consultation. Taken in time, a mishap or slip discovered by no other means can be corrected before it is too late.

RETENTION OF APPPOSITION

When the fractured bones are correctly apposed, the next step in the treatment is retention of the apposition until a sufficient amount of repair has taken place to do so. This broad statement is accomplished in many ways; sometimes it is easy and simple, at other times difficult, requiring considerable skill and surgical intervention.

There are fractures which when once reduced, will remain in position, supported by the surrounding soft parts. In a Colles fracture the flexor tendons in front and the untorn periosteum on the back of the bone are all the support that is desired. A fractured humerus in the extreme lower part, when once reduced and the elbow placed in extreme flexion, will easily be splinted by the tendon of the triceps.

The various devices, which have been used to retain adjustment in broken bones, have been numerous and in many instances quite curious. At the present time, retention is effected by either some operative method in which a plate, a peg, a band or a graft is applied directly to the bone, or some kind of metallic splint or some encasement, such as plaster of Paris is formed about the injured limb.

In the operative method, there are a few cases in which each plan is especially useful. The bone graft in a fractured spine or perhaps a skull; the Parham band in a very oblique fracture of a long bone or a Lane plate in some unusual case which can be held in no other way. The different external splints or appliances such as the Thomas splint or the so-called aeroplane splint, are also applicable in given cases and serve well their purpose. Perhaps however, the method which gives the best satisfaction to most surgeons in most cases is the application of a plaster of Paris dressing, suitable to the case, when apposition is definitely established. The surgeon who has acquired a good plaster technique will seldom find it necessary to resort to any other method. The

pity is, so few surgeons have the patience or will take the time to acquire the same.

ASSISTING THE PATIENT'S REPARATIVE PROGRESS

Is our work ended? By no means. While it is up to the patient to produce the repair, at the same time, we should, if possible, ascertain his capability to do so or assist him in his work. Since the repair of all damaged tissue is done by the blood, bony union of a fractured limb is no exception. A careful study of the blood in a given case may discover a contamination from some focal infection or an extreme anaemia, associated with a pair of damaged lungs or slight destruction of the kidneys. Where least expected a positive Wassermann has revealed the cause of the delayed union. The more rapid repair of a fractured bone in the young, in part at least, may be due to the greater activity of the thyroid gland, at that period of life. The administration of the iodide of potassium or dessicated thyroid gland have worked wonders in many obstreperous cases.

It is needless to say that a close observation of the functions of the vital organs is necessary. These patients are usually very suddenly transformed from an active life to one more or less sedentary. Their sluggish bowels or lazy kidneys will need attention and their changed habits and environment made more agreeable, if they have your assistance.

AMBULATORY TREATMENT

It sometimes happens that although the fracture is in the lower extremity, perhaps even the thigh, either wisdom on the surgeon's part or necessity expressed by the patient, demands an ambulatory treatment. Aged persons do not stand confinement well and one of our most serious fractures, the neck of the thigh, occurs almost exclusively in the aged women. This fracture takes from 12 weeks to 6 months to repair, which would surely mean a mortal hypostatic pneumonia or nephritis if recumbency was continuous during that time. The Whitman method of reduction, an induced impaction and a plaster of Paris spica will permit the upright position and ambulation without the least interference to the process of repair and prevent the undesired complications. The long period of invalidism, in some lower limb fractures, would cause business ruin in the lives of some patients if ambulation were denied. In most simple fractures of the lower extremity, the ambulatory treatment is not only permissible but advisable as well. This is not true, however, of the compound fracture which should be kept very quiet to prevent an excitation of an already infected part.

The patient, who has been up and about, has a much shorter period of convalescence when repair has taken place.

FUNCTIONAL RESTORATION

Our intention is next called to a restoration to

function of the injured part. One should be mindful of this early in the case and as soon as it is safe to commence massage of injured muscles and active and passive motion of neighboring joints. A fracture near or into the elbow joint, as an illustration, when correctly set and retained, can be moved slightly in 10 days or 2 weeks, and if under the care of a competent masseuse, massage and motion of the joint be daily practiced, it is likely, when repair has taken place, that the function of the elbow joint has been reestablished. This may be true of most cases wherever the fracture. It sometimes happens, that long after the active care of a case has ended, the wearing of some splint or device will prevent a slowly produced deformity. Green bone is like a green board, it is easily bent. Should this be overlooked, a beautiful result, say a Potts fracture, may be a disappointment when the flat foot occurs.

The psychological or economic factor in the successful treatment of a fractured bone is the utmost confidence and co-operation of the patient. Without it, one cannot hope for a good result and sometimes it means serious trouble to both patient and surgeon. If a surgeon gives the best that is in him, is honest and frank and from every standpoint has the best interests of the patient at heart success is his, whatever the surgical problem.

CONCLUSIONS

In recapitulating, there are four cardinal steps in the surgical treatment of a fracture.

1. Appose the contiguous ends of the fractured bone.
2. Retain apposition until repair can do so.
3. Study the patient and nurse or treat him during the process of repair.
4. Restore the injured part to function after repair has taken place.

Medical and Medical-Defense Aspects of Fractures*

J. E. TUCKERMAN, M.D., Cleveland

Editor's Note.—Almost one-half of the activities of Medical Defense Committee involve suits against physicians on account of dissatisfaction arising from the treatment of fractures. This does not impute any particular culpability on the part of the profession in the handling of these cases; but it does indicate that patients will indulge in litigation if the slightest pretext is afforded them to do so. Too much stress cannot be laid on the necessity of adequate and detailed records of all fracture cases, progress in treatment, X-ray verification and functional restoration. Such records alone protect the physician and medical defense funds. Individuals, handicapped by lowered resistance from any constitutional cause, require special attention during fracture treatment and appropriate general and specific medication. Such individuals are prone to develop all sort of complications and these must be noted and especially guarded against. Dr. Tuckerman fully appreciates the value of reducing the pain and discomfort arising during fracture treatment to a negligible minimum. He also recalls that certain types of sprains may be fractures and that all fractures do not immediately incapacitate the patient. Unless normal function is restored the patient usually harbors a grievance.

MEDICINE broadly defined as "the science and art dealing with the prevention, cure, or alleviation of disease," includes the subject of fractures as a logical topic of medical consideration. Nevertheless, it is far from clear just what is expected in a symposium on fractures under the topic "medical aspects," when the mechanical and operative measures have been presented in a surgical discourse, and the end results are to have an able legal presentation.

My personal experience does not warrant, nor shall I attempt a discourse on the medical care, in its restricted sense, of patients undergoing surgical treatment for fracture. Without question it is the patient who comes for treatment and not the fracture. Fracture in the abstract is one thing; a patient with fracture is quite something else. This fact merits more general recognition. I shall, therefore, with this in view, direct your attention to some phases of the medi-

cal topic of fractures as seen from the medical defense, rather than the purely clinical standpoint, and after a manner make the topic a transition from the surgical discussion, which has preceded to the forensic which is to follow.

INCIDENCE OF FRACTURE LITIGATION IN MEDICAL DEFENSE

Up to May, 1921, of the 107 matters referred to the Medical Defense Committee (43 threats, 63 suits, and 1 counter-suit) in forty instances dissatisfaction arose from fractures. Classified according to location and parts involved, there were: hip 4, Colles 6, elbow-joint 2, skull 1, ankle 3, wrist 5, leg 5, thigh 4, forearm 5, humerus 1, clavicle 1. Grouped more generally, thirty-nine involved the extremities; nineteen the lower and twenty the upper; and in those of the upper extremities there were eleven at the wrist; and in two instances, one a crushed forearm, and one a dislocation and fracture at the elbow, the forearm had to be amputated.

That fractures, in our experience, occasion upward of one-half the suits against physicians, ac-

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cords with the experience of Medical Defense Committees in other states. This fact does not impute any particular professional culpability in the handling of these cases. There are sufficient other reasons why fractures do, and will continue to furnish more than their proportionate share of legal complications. But the situation does make it important for physicians to remember that any case of fracture may become the occasion for suit.

NECESSITY OF KEEPING CASE RECORDS

That litigation so frequently arises in these cases makes the keeping of detailed case records exceedingly desirable and important. The interest of the patients, where he is entitled to compensation, the interest of the party responsible for the payment of the compensation, as well as the interest of the physician himself, in event any question arise as to the exercise of due care in treatment, make an accurate history in fracture cases second only in importance to the surgical treatment.

The record of the patient should be as complete as possible in the matter of previous health and economic status; the manner in which the accident happened; the patient's statement thereof; the nature and extent of the injury; and the operative procedures undertaken, including a notation of the names of those present.

The progress of the case should be recorded in detail, definite record being made of pertinent statements which the patient may from time to time make. In ambulatory cases the exact dates of appointments, and whether or not the appointments were kept, should be noted, and record made of any evidence that the dressings have been disturbed or that the patient has neglected to follow instructions.

The mental attitude of the patient sometimes shown by antagonistic conduct during treatment, is often an important index as to whether or not litigation will occur in connection with liability settlements; or dissatisfaction result in malpractice suits. Particularly is it true, that charity patients; those practically charity; or individuals purposely misrepresenting their economic status, are the very ones who can be, and are those usually induced to enter suit in hope of gain; or who in liability cases mangle, even to the extent of delaying the recovery of function, in anticipation of or during litigation.

I am aware that the routine hospital record does not adequately cover the points indicated. Nor would I insist that the obligation lies upon the physician to keep in mind and record these additional matters which are not directly concerned with the treatment of the lesion, but he will find it worth while to do so, as the following instances illustrate:

ILLUSTRATIVE INSTANCES

In April, 1920, we were asked by the owners of

the building, in which an accident had occurred, whether we recalled the particulars of the case. We did not recall the particulars, we did not even recall the individual, but were pleased to find that although we had seen the man but once, our records were adequate. A comparison of the statements which he had made to us in 1918, at the time of the accident, with the claims which he was now trying to support with an entirely fictitious statement of the manner in which the accident occurred, promptly dissipated his dream of easy money.

In January, 1921, we examined a man who had been hurt three weeks previously. His chief complaint was pain in the chest, on the right side and over the thoracic vertebrae. He had recently been released from a hospital and the question was naturally raised as to the possibility of malingering. He was examined upon two subsequent dates, two and four weeks apart. It then became apparent that his pain was not confined to the area first noted, but that he progressively complained more of the lumbar region. A radiograph of this region showed no fracture but did reveal a hypertrophic osteoarthritis (spondylitis). The continuation of this man's disability was therefore readily explained. The injury had stirred up an old inflammatory process and it would have been an injustice to accuse this man of malingering.

In March of this year, in examining a woman for an alleged injury to her hand, which she attributed to an occurrence five months previous, the casual remark that she had at one time worked in a laundry and had had to quit on account of rheumatism led to the making of comparative radiographs of both hands, which disclosed that she had a slight general arthritis, involving all the joints of both hands, a condition clearly not due to any accidental hurt.

THE PHYSICAL CONDITION OF FRACTURE PATIENTS AND COMPLICATING DISEASES

Fractures usually occur as an incident in some active pursuit, wherefore, most patients with fracture are individuals in normal health and need no special attention in this respect unless the injury confines them to bed. During enforced inactivity the maintenance of good health is not a problem peculiar to fractures. The recognized, hygienic rules, as to light, air, food, sleep, physical comfort and diversion are to be observed and the patient should have good nursing care.

Sluggish digestive functions and undue loss of sleep are not unusual in an individual suddenly rendered inactive, and are to be met by appropriate tonics and sedatives. Individuals handicapped by lowered resistance from any cause such as the cachexia of constitutional, specific or malignant disease, require special attention, and so far as the condition presented is amenable, general or specific medication should be given.

Because of their import both on treatment and

prognosis, rickets, osteomalacia, osteomyelitis, and the involvement of bone by tertiary lues, tuberculosis, or primary or metastatic malignant tumors should be kept in mind. There is associated with these diseases an abnormal liability to fracture as well as distinct problems in treatment.

Pressure sores are more liable to occur in the aged, the diabetic, and in those with trophic disturbances or injuries involving the nerves. There are cases in which no amount of care will prevent the development of typical bedsores. Ordinarily, however, the relief of pressure over bony points, persistent attention to keeping the skin dry over points of pressure and the use of protective dressings will prevent such complications.

The necessity for care not to occasion pressure necrosis, in the application of splints and casts, is well recognized. The undernourished child, frequently seen in the orthopedic service of our hospitals, appears to be particularly liable to injury from apparently slight pressures.

Where delayed union occurs as the result of luetic infection, specific treatment is indicated. If union has failed to result because of too great fixation, mechanical stimulation should be considered. For this the ambulatory splint is particularly useful in fractures of the lower extremities. For slow repair, fibrous union, or even non-union such as not infrequently occurs in the aged, particularly in fractures at the hip, there is little which can be done, and generally speaking open operative interference is not advisable.

The importance of injuries to the soft parts arises from the fact that extensive tissue slough and if essential blood vessels are involved, thrombosis of veins, embolism, arterial aneurisms, or gangrene may result. Where the extent to which circulation is impaired cannot be immediately determined, the first consideration is to favor the reestablishment of blood supply through the application of heat, protective dressings, and position. Until the viability of the part be determined accurate apposition of bony structures is of secondary importance. Fracture at the elbow joint is quite liable to be complicated by interference with the circulation, and it is important to avoid any form of dressing which in the event of acute swelling might interfere with the blood supply of the forearm.

The treatment of those conditions where there has been atrophy of the muscles and nerve injury constitutes a problem peculiar to orthopedic surgery.

COMPLICATING INFECTIONS

Prolonged inactivity in bed is particularly serious for the aged because of the frequency with which they develop hypostatic pneumonia. The avoidance of such a complication or its successful treatment is often more important than to be assured of a perfect union in a hip or thigh. Even in younger patients pneumonia may become a complication, especially during periods of epidemic

respiratory infections. The chronic alcoholic is, also, prone to develop pneumonia, and the millennium is not so long with us but that we must remember the possibility of delirium tremens.

Impaired motion is not always due to changes in the joint but may occur in an extremity because of injury either to nerves or muscles, or to involvement of these structures in the callus. Occasionally temporary paralyses are chargeable to an intercurrent, though light, pharyngeal diphtheria. In such cases recovery of function is hastened by the use of strychnia.

Wherever, from the nature of the accident, the possibility of infection with tetanus is present, prophylactic serum is always advisable. As to the treatment in general of infected wounds complicated by fracture,—this is an extensive subject and one upon which you are destined to hear at length from the full experience of army surgeons.

PAIN

Severe pain does not usually continue after reduction and fixation. If it does continue, failure of the fragments to remain in proper apposition or pressure from splints or bandages may be the cause. As there is always a possibility of acute swelling of the soft parts causing the dressing, whether a cast or splint and bandages, to become dangerously tight, ambulatory patients should be directed to report promptly in case they have continued pain, and the record of the case should show that this instruction was given.

Patients quite often complain of pain in the muscles similar to that associated with lumbago and described as rheumatic. Usually there is a history of a recent cold or sore throat, and the pain yields to salicylates. If it does not the question of focal infections must be considered, as well as the possibility of syphilis. And, even though the Wassermann test is negative, you may find that the pain is relieved by anti-leucic treatment.

Where there has been an injury to the chest and there is pain upon motion or during respiration, which becomes more painful each succeeding day; and there is no sign of injury to the lung itself, it is more than probable that there has been fracture of a rib (or separation) from its cartilage, which the radiograph may fail to show. A separation of bone and cartilage, where there is no displacement, is rarely shown by the radiograph and even line fractures of bone without displacement may not become apparent until the process of repair has changed the density of the bone at the point of fracture.

Not all injuries resulting in fractures are immediately accompanied by loss of function, and it is quite possible for pain to be so slight as to be ignored. I know an individual who pitched three innings of baseball forty-eight hours after receiving a line fracture of the radius, and even then came to the physician because his arm had

swollen, and not because he had any thought of fracture. Recently, in Cleveland, there occurred two instances of active individuals who having sustained impacted fractures of the neck of the femur yet continued to use the limbs until the increasing pain led to the discovery of the fractures.

The history of a fall upon, a heavy blow to, or a pinching of the pelvis, even in the absence of immediate loss of function should always direct the attention to the possibility of impacted fractures of the hip.

The continuance of pain, or the occurrence of pain and increased disability two to three weeks after severe injuries, it may be in parts remote from that portion originally complained of, requires serious attention. Not infrequently the radiograph will show the presence of an undiscovered line or "cracked pot" fracture. Both the spine and pelvis are frequently the location of such fractures. Or it may prove that the condition is occasioned by the lighting up of a chronic arthritis or spondylitis; or, in a joint, the development of the destructive process of Charcot's disease, or tuberculosis.

RADIOGRAPHS

The public has been taught by newspapers, and I fear by some doctors, to believe in the absolute finality of radiography. Facts do not warrant such a belief, but in event of suit the physician, who has not had a radiograph made of a fractured bone, is none the less placed in an unfavorable light, irrespective of whether or not a radiograph would have altered the result. The value of the radiograph, however, as an aid in diagnosis and as a record of the progress of the case, is such that the physician should have the information and the protection it affords.

As a matter of record, even where there is no uncertainty as to the nature of the fracture, a radiograph should be made both before and after setting. Wherever a fracture may have occurred, particularly in injuries about joints, such as sprains and dislocations, or where a crushing force may have been applied to bone possibly producing cracks but not displacement, a radiograph is essential. It is in these unrecognized fractures, especially at the wrist and ankle, the so-called "fracture sprain," that many bad results occur. When from the nature and location of the injury, marked deformities due to displacements or angulations are liable to occur, as in Colles' and Pott's fractures and fractures of the thigh or hip, it is always well to have additional radiographs made during treatment, as well as the final record made at the time of dismissal.

There are indeed circumstances in which the interest of the patient would not be served by insisting upon a radiograph. No physician would transport an unconscious man with a broken thigh forty miles to an X-ray apparatus. Exceptions such as this are exceedingly rare, so remember this:—*The patient who urges that he is*

unable to afford a radiograph is the very patient whose fracture the physician can ill afford not to have radiographed.

Physicians neglect a wonderful opportunity when they fail to correct the mistaken notion held by their patients as to the "all seeing" ability of the X-rays.

The radiograph is not a portrait, rather it is a silhouette, a shadow-writing, recording the outline of certain structures and indicating in varying depths of light and dark the relative densities throughout the body of the structure radiographed.

The radiograph is not infallible. The story it tells must be interpreted and the several facts incident to the making of a plate, distance of tube, time of exposure, angle and focus, nature of the thing sought to be disclosed, all should be known to the specialist who interprets the plate.

RESTORATION OF FUNCTION

The restoration of function is a special problem in itself. It must be said that the problem has not been given that general recognition it should have, and that more often than not the patient is unwilling to devote the requisite time or to cooperate. We may not be able to cause the growth of bone which has had its growth arrested by fracture at the epiphyseal line, or to so control excessive callus formation or bony outgrowths in the neighborhood of joints as to obtain perfect function, but much can be done. It is therefore regrettable that many patients with fractures of the extremities are dismissed or fail to report to the physician after the removal of the splint. In the restoration of function there is a very definite field for the use, of active and passive motion; massage; and heat variously applied. To hasten the absorption of inflammatory deposits and as an aid in limbering up ankylosing joints diathermy (local heat developed in tissues by their resistance to the passage of rapidly alternating current) seems to open new possibilities. Even without having the equipment of hospitals and clinics the physician can do much, if his patient be an intelligent individual who will carry out instructions. I have seen normal motion regained both in wrists and elbows through following very simple suggestions. There is no better exercise for regaining the function of the hand and wrist than to seize every opportunity to open and close doors, grasping the doorknob with the hand which has been injured.

The foregoing remarks do not pretend to be a full presentation of the subject. They have, of necessity, been fragmentary and are intentionally directed to matters, which from the standpoint of Medical Defense should be kept at all times in mind.

In closing, may I urge upon you the desirability of acquainting yourselves, how in many ways, fully set forth from time to time in your *Journal*, the Association's Medical Defense can be of service to you.

Legal Phases in Relation to Liability for Malpractice with Special Reference to Fractures

MR. LEROY E. EASTMAN, B. L., Toledo

Editor's Note.—Legally, a physician is not required to treat a case unless he so desires. If he accepts the employment, he contracts to bring to it the average degree of skill, care and diligence exercised by the members of his own profession in the same or similar locality, in the light of the present state of medical science. He cannot abandon the case without cause or without proper notice to the patient. He must make as careful and as skillful a diagnosis as the circumstances and conditions will permit. He must follow the approved method of treatment, and if there is more than one approved method, he must use his best judgment in determining which method to follow. He must use ordinary skill, care and diligence in reducing a fracture. He must give the patient proper instructions as to the care, attention and caution to be exercised by the patient in his absence. He must attend with sufficient frequency, and it is for the physician to determine when the case requires no further attention. He must use due care in the selection of his assistant, or of another to perform an operation which may be necessary. He is liable for the acts of his assistant or for another employed by him, so long as they are jointly engaged, and is liable for the acts of an assistant or interne acting under his direction.

IT IS somewhat difficult to know just where to begin and where to leave off on the subject of the legal phases of fractures. There is no particular reason why this subject should be discussed in a symposium on fractures, because the rules of conduct of a physician, with respect to fracture cases are just the same as they are in other cases—but I suppose it has been included here, because the majority of the some one hundred cases which have passed through the hands of the Defense Committee of your Association, and under its supervision, are fracture cases. In fact, they are so much in majority as to lead to conjecture that every fracture case, especially among the class of indigent patients, is a potential or embryo malpractice suit.

THE GENERAL PHASES OF MALPRACTICE

The subject of malpractice is more or less simple, and yet, like all subjects of its kind, it covers a more or less broad field. I shall endeavor to cover only the high spots, so to speak, and shall not touch upon some of the technical, legal phases of the subject, in which you are doubtless uninterested.

Our Supreme Court in several cases, and the courts of other states as well, have very plainly defined malpractice. As stated before, the definition applies equally to the fracture case and any other case. Your committee, in some four years approximately, has dealt with almost every kind of case, from serious fracture cases down to the claim which was recently made against a doctor, on the ground that he permitted a woman to take a long journey and she died on the way, and because he permitted her to go they now seek to hold the doctor liable in damages.

I think I can give no better definition of malpractice than to read some expressions of our Supreme Court. One of the first cases in Ohio was that of *Craig v. Chambers*, 17 *Ohio State Report*

253. In that case, the Supreme Court defined the duty and undertaking of a physician as follows:

"The implied liability of a surgeon, retained to treat a case professionally, extends no further in the absence of a special agreement, than that he will indemnify his patient against injurious consequences resulting from his want of a proper degree of skill, care or diligence in the execution of his employment * * * . By accepting the retainer the surgeon bound himself to bring to the performance of his undertaking, a reasonable degree of care and skill, but in the absence of a special agreement to do so, he did not undertake to perform a cure; nor can negligence be implied from the failure of the defendant to effect a cure. Such failure may have arisen from the age and constitution of the patient, or from the inherent difficulties growing out of the nature of the injury, which may have been such as to baffle the highest degree of skill and care."

In the much quoted case of *Gillette v. Tucker*, 67 *Ohio State Report* 106, which went to the Supreme Court from Toledo, the Court very clearly defines malpractice:

"A surgeon and physician employed to treat a case professionally, is under an obligation which the law implies from the employment, to exercise the average degree of skill, care and diligence exercised by members of the same profession practicing in the same or a similar locality, in the light of the present state of medical and surgical science; and that he will indemnify the patient against any injurious consequences which may result from his want of ordinary skill, care and attention in the execution of his employment.

"It is the duty of the physician and surgeon to exercise due and ordinary skill, care and attention not only in and about an operation which he decides to be necessary, but also, in the absence of a mutual understanding or notice to the contrary, to render such continued further care and treatment as the necessity of the case requires; and he is liable for

* Read before the General Session of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

injuries and damages which proximately result from the want of such ordinary skill, care and attention."

Now, a doctor may be ever so skillful, but if he fails to exercise that skill with the proper amount of care and attention, he may be guilty of malpractice. He may be ever so skillful and ever so careful, yet if he fails to use diligence in looking after his patient, he may be guilty of malpractice, and on the other hand, he may be ever so careful and use the utmost degree of diligence, yet if he has not the requisite skill, he is guilty of malpractice. So you must have a reasonable degree of skill which the members of your profession have in the same locality and in the light of present development of medical science; you must exercise that skill with care; and you must give due attention and diligence to the interest of your patient. A doctor must bring these requisites to the treatment of every case.

The Court, in the Gillette case, further said:

"The engagement was such that the law implies a promise on the part of the surgeon that for the operation and subsequent necessary treatment, he would use due care and diligence to the end that a recovery might be had. This obligation arose in the contract of employment and as a matter of law, and the obligation existed as long as the relation of patient and physician and surgeon continued. In the engagement, the surgeon assumed to exercise the ordinary care and skill of his profession, in the light of the modern advancements and learnings on the subject, and became liable for the injuries resulting from his failure to do so."

There is one proposition which might well be emphasized at this point, and that is on the matter of after-treatment; the necessary treatment following an operation. On this subject the Court said:

"We hold the proposition to be sound; that this degree of skill and care is to be exercised, not only in performing the operation, but also in the subsequent necessary treatment following such operation, unless the terms of employment otherwise limit the service, or the patient give the surgeon notice that he will not or cannot afford the subsequent treatment.

"If we call malpractice a tort in this case, it is a tort growing out of a breach of contract which the law implies from the surgeon's employment and undertaking to perform the operation. We have seen that it was a continuous obligation and recognized by the law, and it was alive and binding so long as the relation of physician and patient subsisted. If so, it was the ever-present duty of the surgeon to remove the sponge from the body of the patient. It was a constant and daily obligation to use ordinary skill and care, and if by omission or negligence he had left a foreign substance within the walls of the incision at the operation, it behooved him to afford timely relief. Neglect of this duty imposed by a continuous obli-

gation was a continuous and daily breach of the same, and as the facts show, caused continuous, increasing, daily and uninterrupted injury."

Medicine is a progressive science. As your profession progresses you must progress. You will observe that the Court in the Gillette case, in several places states that care and skill must be used in the light of the present state of medical science, which is simply another way of saying that you are obliged to keep up to date. If you lag behind, you are taking chances every day you practice your profession, of being guilty of malpractice.

WHAT CONSTITUTES MALPRACTICE

Let us note, for a moment, some of the things which have been held to constitute malpractice. As to *diagnosis*, it has been held that the doctor is liable, if he fails to ascertain the nature of the injury, or the nature of the ailment from which the patient suffers. If he makes a mistake in his diagnosis, and this mistake is occasioned by his failure to use proper methods and proper care in making the diagnosis, he is liable for injuries which may result. Do not understand that you are guilty of malpractice or can be made liable in damages whenever a mistake occurs, because if you follow up the case carefully and bring to it the requisite amount of skill, it is not ground for liability; but the doctor must use and employ the proper amount of skill, care and diligence in making his diagnosis, under the conditions which exist at the time. The test is applied under the conditions that exist at the time the doctor is called; the opportunity he has to make the diagnosis, the condition of the patient, and all the surrounding facts and circumstances. If the physician has the proper skill and makes as careful a diagnosis as is possible under the circumstances and conditions as they exist at the time, he has fulfilled the legal requirements, and if a mistake occurs and he commits an error of judgment, there is no liability.

Nonetheless, malpractice may be committed as well in the making of the diagnosis as in the subsequent treatment. There is a case now pending in which a doctor was called to treat two children. These children were suffering with some sort of throat affection and the doctor diagnosed the condition as infected tonsils. In about ten days, one of the children, a girl seven years of age, died. The next day, the doctor took the other, a girl thirteen years of age, to the hospital and removed her tonsils which were badly infected. She died the following day. It was charged in the petition that the children died of diphtheria and that the doctor was negligent in that he failed to diagnose the disease as diphtheria, and that he was negligent in removing the tonsils under the circumstances. These are the claims of the plaintiff. I shall not detail the claims of the physician. We won the case in the Court of Common Pleas, because of the mistakes

of the lawyers on the other side, and not on the facts involved. This was a case where, in my opinion, the proper and requisite amount of skill, care and attention were not given in making diagnosis. I mention the case solely because it illustrates the point.

A mistake in diagnosis is not ground for malpractice unless it is followed by wrong treatment. In other words, if you make a mistake in your diagnosis, but give the proper treatment for the injury or malady from which the patient is suffering, the error in diagnosis is not material, because the results, so far as the patient is concerned, are just the same. Consequently, the ultimate test is the treatment that was given. This is measured in all cases by the approved methods of treatment. In the trial of a case, we show the treatment which was given, and then prove by experts, or otherwise, that it is the approved and customary treatment for that particular malady or injury. The physician is required to follow the approved method of treatment, and that approved method must be the up-to-date method of treatment. If he experiments, he does so at his own risk.

The ordinary practitioner is not held to the same degree of skill as a specialist. A man practicing in the country, without all of the appliances and means of making a diagnosis, or giving treatment, is not held to the same degree of skill as one who specializes in the particular field under consideration, and who has at his command apparatus and appliances not available in the average small community. The general practitioner is required to exercise that degree of skill and care exercised by the members of his profession in the same or similar locality, in the light of the present state of medical science.

ILLUSTRATIVE CASES

There is a case pending in which a boy had his foot run over by a motor truck. The father and guardian each brought suit and recovered damages from the owners of the truck. They afterwards sued the doctor who treated the injury. The facts of the case indicate that the doctor, upon making his examination found a laceration on the under-part of the somewhat swollen foot. He cleansed and treated the wound and bound it up. The foot did not improve, but continued to look angry and sore, and refused to yield to treatment. The father employed another physician, and it occurred to him to take an X-ray of the foot, which disclosed that there was a fracture of one of the bones. Immediately upon making this discovery by this not unusual and strange method of using the X-ray, they sued the doctor for malpractice. It was malpractice, I think. When there is an opportunity to take an X-ray picture in the treatment of an injury of that kind, and the first thing that ought to occur to a surgeon would be a fracture, the failure to take an X-ray is malpractice of itself. This case further illustrates the point I have en-

deavored to make. You are bound to use care and diligence in the light of present day medical science, and certainly present day medical science requires the use of the radiograph in cases of that nature. We expect to win this case because the father and guardian obtained a settlement from the owners of the truck, and there can be but one satisfaction for an injury. That is another instance where the doctor is lucky.

A short time ago a young bank clerk in Cleveland, who was suffering with rheumatism in his arms, wrists and hips, called the doctor to treat him. The doctor made a very thorough examination and treated the young man for articular rheumatism. The treatment was followed by an immediate improvement, and after a week or ten days the young man insisted upon going to a dance. The doctor told him not to go. He went regardless of the doctor's advice, with the result that he got worse afterwards. The doctor continued the treatment, but in the course of a few days, noticed that things were not just as they should be and he was called to task very severely by the parents, because, as they charged, he had not treated the case properly and had not given the boy proper instructions. With great surprise and some chagrin, the doctor left the case, and a short time afterwards learned that a chiropractor had been on the job. The malpractice suit followed shortly afterwards. The claim in the suit was that the doctor had failed to diagnose a fracture of the neck of the femur. He had been very particular to inquire of the young man whether he had had any fall or injury to his hip, which seemed to be the seat of the trouble. He was told he had not. The strange part of it was that the X-ray showed a fracture. During the pendency of the case the young man died of pulmonary tuberculosis and tubercular peritonitis. I do not know how his leg came to be fractured, but there are cases on record where chiropractors have caused that sort of thing. I mentioned the case for one purpose only. If that doctor had immediately, upon being called to the case used the radiograph, no such claim could have been made, and no doubt he could have been saved the unpleasant experience of being sued. He would have had a perfect defense if he had had an X-ray showing that there was no fracture at the time he treated the case. It was pure accident that the young man died before the case was tried, but if it had come to trial and an X-ray, showing a fractured femur, had been exhibited to the jury, the chances of the doctor would have been rather gloomy. He would have been compelled to rest upon his own statement as to what conditions were present when he was called on the case.

This case emphasizes again the necessity of the X-ray. I do not know that it is necessary, or even proper, to preach to you on that subject. The rules of the Defense Committee require an X-ray in a fracture case, where it is possible to

obtain one. If the committee deems it of such importance that they decline to defend you unless you have an X-ray, then certainly there can be no excuse for any doctor to treat a fracture otherwise, when it is possible to obtain one.

APPROVED METHODS OF TREATMENT

It has already been mentioned that the failure to follow the established practice, constitutes malpractice. Now, in some cases there is more than one approved treatment. You are all aware of that, and if the facts of the case show that the doctor has made a proper diagnosis, has used the proper care and skill in determining the nature of the injury or ailment, and that there are two or more approved methods of treatment, then all that the doctor is required to do is to exercise his best judgment in selecting which of those approved methods is best to follow. A case in Cincinnati, *Moehleman v. Ransohoff* is in point. The defendant was a noted surgeon. The injury involved was a compound fracture of the humerus. It appeared from the evidence that this was a very obstinate case and that the doctor had used the proper care and skill in making his diagnosis and in attempting to reduce the fracture. He had attempted to hold the parts in place by the use of plates. The testimony of the experts showed there was a difference in opinion as to exactly the course to pursue. One course was as much approved as the other. The Court directed a verdict for the defendant, on the ground that the doctor was not liable when he selected one of two or more approved courses of treatment. The fact that he was unsuccessful in effecting a cure was not to be considered.

CONSIDERATION OF NEGLIGENCE

It has been held that a doctor is not required to accept a case, unless he so desires, even though he may be the only physician available. He has the right to refuse, yet if he assumes the case and the patient is relying upon him, he cannot without good reason and without proper notice to the patient, abandon the case. A physician, responding to the call of a patient, thereby becomes engaged, in the absence of a special agreement, to conduct the case so long as it requires attention, unless he gives notice to the contrary, or discharged by the patient. He is bound to use ordinary care and skill, not only in his attendance, but in determining when it may be safely and properly discontinued. But when a patient goes to the office of the physician, from whom he receives proper treatment, and then fails to return for further treatment, he has no right of action against the physician because of subsequent suffering.

A physician is not chargeable with neglect on account of the intervals elapsing between his visits, where the injury requires no attention during those intervals, but he is negligent where attention is required. He is permitted to temporarily leave his practice, if he makes provision

with a competent physician for attendance upon his patients, but a physician who leaves his patient at the critical stage of a disease, without reason or sufficient notice to enable the party to procure another medical attendant, is guilty of dereliction of duty and is liable.

A physician has also been held liable to respond in damages for failing to attend a patient when he was at the time engaged in a confinement case, which he had previously assumed. The doctrine on which the decision was based was simply that the doctor himself contracted the obligation and it was up to him to perform it. If he contracted more obligations than he could perform, it was his own loss. The patient had a right to rely on his contract of employment.

Performing an operation without the consent of a patient, except in very exceptional cases when the patient is unconscious or in a similar emergency, is ground for malpractice. A case went to the Supreme Court from Cleveland in 1917, *Wells v. Van Nort*, in which the surgeon was operating upon a woman for appendicitis. She and her husband had both consented to the operation. The surgeon informed the husband after the operation that he had found the fallopian tubes infected and had removed them, and said, "I could have treated them in four or five months, but she is better off without them." The Supreme Court held that was not such an emergency or such a condition that would justify their removal, and that the surgeon is liable in a case of that kind.

INSTRUCTIONS TO PATIENTS

It is the duty of a physician or surgeon, in taking charge of a case, to give his patient all necessary and proper instructions as to what care and attention the patient himself should observe in the absence of the physician, and for failure to discharge his duty in this respect, he may be liable in damages. This subject of instructions, is a never ending source of difficulty and I wish there might be some way in which a doctor might protect himself on this score. In almost every case we get into, whether it is a fracture case or any other sort of case, there is controversy over the matter of instructions. The patient and the family testify that the doctor gave them no instructions, or that he told them thus and so, and the doctor testifies that he gave them the instruction which was proper under the circumstances. It often becomes a matter of the statement of the doctor against the statement of the patient and sometimes the patient's entire family.

The medical profession is interested in preventive methods, and you are especially interested in preventing and reducing to a minimum suits of this character. The subject of instruction is one of the most important elements. *If there can be some method devised whereby we would have some positive definite evidence as to what instructions were given, such evidence would be of immense value.* Would it not be possible to use

a printed form, on which the instructions necessary in each case would be written out, and given the patient and a carbon copy retained by the doctor? Any permanent record of just what instructions were given would suffice. It is an important factor in many cases, and very often the issue as to just what instructions were or were not given, is sharply defined and is resolved into a question of veracity between the doctor and patient, who is often corroborated by others. If the physician could present a carbon copy or other record of his instructions, the matter of proof would be simple and exact.

LIABILITY FOR ASSISTANTS

You are also interested as to the extent of the doctor's liability for his assistant or an interne. This question most frequently arises in the sponge cases, where the doctor has left some foreign substance in the abdomen at the time of the operation. Our Supreme Court has held emphatically that the operating surgeon cannot escape liability for a thing of that kind by claiming that it was the duty of the nurse to count the sponges, or the duty of the assistant or someone else. The use of sponges is just as much a part of the operation as the use of a knife or other instrument. You cannot escape liability by claiming it was your assistant's duty or the nurse's duty to remove them.

But a doctor is not liable for the acts of an interne, in the treatment or dressing of a case, where he is not present and where the interne is not under his direct supervision. Most operations are performed at the hospital where an interne is an employee of the hospital, and the doctor in charge of the case cannot be held liable for something which the interne or hospital nurse does in his absence and without his direction. A physician is liable for the acts of his assistant, or if he has an operative case and employs another to perform the operation, both he and the operator are jointly liable for negligence, so long as they are jointly engaged, and he must use due care in selecting his assistant, or in selecting the man whom he employs to perform an operation.

THE STATUTE OF LIMITATIONS

The matter of after treatment mentioned before, brings up the question of the statute of limitations. The present situation in Ohio is very discouraging. In the Gillette case mentioned heretofore, in which the claim was made that a sponge was left in the abdomen, the patient returned to the doctor almost daily for treatment. There was a running sore, discharging pus, which had to be dressed twice a day. In her petition, the plaintiff charged that it was a continuing duty on the part of the doctor to remove that sponge every day she went to him, and that each day it annoyed her constituted a new breach of his duty toward her. The Supreme Court sustained this contention and held that the after-treatment was as much a part of the operation as anything else. The doctor was negligent, even though he may have used the ut-

most care, skill and diligence in the operation itself, if he failed to give the proper treatment after the operation and was as liable as though he never used any skill whatsoever.

Now the statute of limitations provides that an action for malpractice is barred within one year after the cause of action accrues. The difficulty has arisen in determining when the cause of action accrues. You would naturally think it accrued at the time the operation was performed, but in the Gillette case, it was held that the cause of action accrued at the time the relation of patient and physician terminated. That decision was rendered by a court equally divided, and consequently the decision of the Circuit Court was affirmed. Judge Davis rendered a strong dissenting opinion, contending that the cause of action accrued at the time the injury was done, in other words, at the time the operation was performed. In the 72nd Ohio State, the Court affirmed Judge Davis' dissenting opinion and reversed the Gillette case, the effect of which was to hold that the statute commenced to run from the time of the injury. In the case of *Bowers v. Santee*, 97 Ohio State, the Supreme Court reaffirmed *Gillette v. Tucker* and again held that the cause of action accrued and the one-year limitation commenced to run at the time the relation of physician and patient terminated.

We now have a case in which the matter is again before the Supreme Court. That the Court permitted the case to be reviewed was a distinct surprise, and while the Medical Association was not directly interested, we took occasion to appear on behalf of the Association to endeavor to again have the Gillette case affirmed. The case is that of *Amstutz vs. King, et al*, and grew out of an abdominal operation. A sponge was left in the abdomen and some 18 months after the operation it passed away, at which time its presence was first discovered. There is no claim made in the petition that the defendants were engaged on the case after the date of the operation, or rendered any after treatment whatever. The claim is made that the statute of limitations runs from the time the injury was discovered.

The statute of limitations is a statute of repose. It is the policy of the law that litigation should be put at rest during the time when witnesses are available and evidence has not been lost or destroyed. If the Supreme Court should declare the doctrine, as claimed by the plaintiff in the Amstutz case, we would never know where we stand, because if an action can be maintained where the injury is not discovered until 18 months, then by the same reasoning a doctor might be held to answer for an injury which is not discovered until after five or ten, or even twenty years.*

*Note.—Since the date of these remarks, (May 5, 1921), the Supreme Court has dismissed the case of *Amstutz v. King* and in doing so approved and followed *Gillette v. Tucker* and *Bowers v. Santee*, supra. Thus the rule is again established that the one year limitation commences to run from the date when the relation of physician and patient is terminated.

THE LEGAL PHASES OF FRACTURES

These principles may be summed up and applied to the subject at hand "The Legal Phases of Fractures:"

A physician is not required to assume the conduct of a case unless he so desires. If he accepts the employment, he contracts to bring to it the average degree of skill, care and diligence exercised by the members of his own profession in the same or similar locality, in the light of the present state of medical science. He cannot abandon the case without cause or without proper notice to the patient. He must make as careful and as skillful a diagnosis as the circumstances and conditions will permit. He must follow the approved method of treatment, and if there is more than one approved method, he must use his best judgment in determining which method to follow, he must use ordinary skill, care and diligence in reducing the fracture. He must give the patient proper instructions as to the care, attention and caution to be exercised by the patient in his absence. He must attend with sufficient frequency and it is for the physician to determine when the case requires no further attention. He must use due care in selection of his assistant, if he has one, or in the selection of another to perform an operation which may be necessary. He is liable for the acts of his assistant or for another employed by him so long as they are jointly engaged, and is liable for the acts of an assistant or interne acting under his direction.

A majority of the malpractice cases grow out of fractures. I do not know how much of that which has preceded is of interest to you. I do know that you are interested more in preventing suits than in winning them after they are commenced. You are, and will continue to be the targets of wholly ungrounded suits of this character, some of which are almost akin to blackmail. Sometimes, even where the utmost care and the very highest degree of skill are employed, if the result is not satisfactory, the patient assumes he has been improperly treated and immediately brings suit. If you will permit me to assume the role of preacher for a moment, I will say to you that *a lot of malpractice cases are the fault of you men sitting here because you are not charitable enough to your competitor. Suits have been brought or threatened, where the thing has been deliberately worked up by some doctor who has a grudge against another.* Sometimes, whether induced by a desire to create an impression, or by an endeavor to make a show of superior knowledge, someone permits himself to criticize the other man's work and a suit is the result. This situation has actually arisen a number of times. I do not mean to advocate the shielding of anyone guilty of wrong-doing or unwarranted carelessness, but it is much easier to tear down than to build up. much easier to criticize than to create. Conditions may have materially changed before the patient comes to you, and perhaps your

course of procedure would have been no different than that of your predecessor on the case, had you been placed in the same position and under all the identical circumstances.

Malpractice cases are universally distasteful and are often an attack upon the professional reputation of the defendant. If you will be charitable and bear in mind that the other man's shortcomings are perhaps no greater than your own, that everyone makes mistakes, and be careful how you criticize to the patient, I feel sure that the work of your Defense Committee can be very materially reduced. If close attention is given to the matter of instructions, it would help in a large measure, if not in the prevention of cases, at least in better protection in case you are required to go into court and defend yourself.

So far as the X-ray is concerned, aside from all other considerations, when you get into court and can produce the X-ray negatives or prints from them, the jury can often see the condition with which you had to deal, and expert witnesses are not required to rely on your description of the case, but can form their judgment of the conditions from these records. If you have a picture taken after the reduction is made, it is possible to see the results which you obtained. It may be the determinative factor between winning and losing, whether you have that evidence or not. If you do not have it, you are forced to rely solely upon your description of the conditions you had to start with and the results which you obtained.

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NEW BOOKS

Diseases of the Skin, by Richard L. Sutton, M. D., Professor of Diseases of the Skin, University of Kansas School of Medicine; former chairman of the Dermatological Section of the American Medical Association; Assistant Surgeon, United States Navy, retired; Dermatologist to the Christian Church Hospital. With nine hundred, sixty-nine illustrations and eleven colored plates. Fourth edition, revised and enlarged. The C. V. Mosby Company, St. Louis. Price \$9.50.

A Treatise on the Transformation of THE INTESTINAL FLORA with Special Reference to the Implantation of Bacillus Acidophilus, by Leo F. Rettger, Professor of Bacteriology, Yale University, and Harry A. Cheplin, Research Fellow, Yale University. An experimental study of some of the important problems of intestinal bacteriology, dealing in particular with the agencies which determine or control the types of bacteria within the intestine, and with the inter-relationships of intestinal bacteria. The book is abundantly illustrated with curves, tables and photographs, and embodies the subject matter presented in a course of lectures given at Yale University in December, 1920, on the Silliman Foundation. Yale University Press, price \$3.00.

Public Health Work in Portage County*

By R. D. WORDEN, M. D., Ravenna

Editor's Note.—From the results of rather intensive health work in Portage County, Dr. Worden is convinced that the real success of public health will come only through a long period of years and as a result of a comparatively slow educational process. To eliminate friction regarding school examinations the methods used were publicly demonstrated to the parents and a very gratifying change in attitude was the result. These demonstrations also afforded Dr. Worden opportunities for presenting other phases of health work and were of great value in the efforts to raise money for the county health fund. The action of the Portage County Medical Society in making free examination and giving advice regarding the attention needed by children with reported defects also aided materially in making the health work effective.

IN October, 1920, the State Department of Health of Ohio offered to assist some rural county in the State in conducting a health demonstration, it being their intention to foster a program adapted to the needs of a rural community which would work out methods that might be applied in any rural county. Fifteen counties in Ohio made application for the assistance of the State Department of Health. After giving due consideration to each county, and making personal investigation of the claims of each, the State Department of Health finally selected Portage county. As stated in the Ohio Public Health Journal for November, 1920, Portage county was chosen because of its superior roads and other means of transportation, and because of its possessing hospital facilities.

COORDINATING HEALTH AGENCIES

For the past four months we have been endeavoring to lay a foundation for the successful consummation of the health demonstration idea. In order to make more direct contact with the community, and in order to supplement the official budget of the Ravenna City and District Boards of Health, the organization of the Portage County Public Health League was started. This organization is affiliated with the Ohio Public Health Association.

For the purpose of coordination, and in order to avoid duplication of effort, it would be desirable that every health agency and worker be centralized under one administrative head. Although this condition does not exist at the present time in Portage county, a start has been made in that direction. The offices of the County Chapter Red Cross, the Ravenna Visiting Nurses Association, the Public Health League, and the two Boards of Health are located in the same building. The nurses in the field while not under the direct administration of the Board of Health are giving a considerable portion of their time to carrying on the general program. I believe it to be just a question of time when all of the health agencies in the county will be devoting their entire time to making an actual realization of the health demonstration idea possible.

One thing we have learned is that a comparatively small number of people in a rural community are vitally interested in preventive medicine. They are prone to view with suspicion any act on the part of an official organization which might in any way be considered the movement of a machine. To be a real success a preventive medicine program must have the sympathy and co-operation of the community as a whole, and judging from the results of rather intensive efforts in Portage county I am convinced that its real success will come only through a period of years, and as a result of a comparatively slow educational process.

Although we have not been able up to the present time to put in full operation all of those features of the health demonstration program which are desirable and necessary, there have it seems to me been a sufficient number of accomplishments to warrant an extension of the program. For the sake of clarity let us consider these under their respective groupings.

MEDICAL INSPECTION IN THE SCHOOLS

Two physicians detailed from the State Department of Health are putting their entire time into this work. They are assisted by a nurse provided by the union of the county and Ravenna City Boards of Health, a nurse provided by the Portage County Chapter Red Cross, and the nurses of the Ravenna and Kent Boards of Education. *The people of the community had had previous opportunity to follow the results of the nurses' examination, and considered that a sufficiently detailed examination. They did not at first appreciate the necessity for a complete physical examination such as a qualified physician would make. We had advertised rather extensively that doctors would visit the schools for the purpose of giving the children physical examinations. During the first few days of this work it was surprising to see the large number of objections of parents requesting that their child be not examined. Believing these objections to arise as a result of misconceptions on the part of the parents, and in some cases the teachers, we developed the idea of demonstrating to the parents how the examination was conducted. In practically every section of the county we held*

*Read before the Section on Hygiene and Sanitary Science of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

meetings and examined a boy and a girl in the presence of the parents, following the same routine that was used in the schools. It was very gratifying to note the change in attitude on the part of parents toward medical inspection. People who had insisted that their child should not be examined became just as insistent that their child should be examined. These meetings also gave us opportunities to present other phases of health work, and were of inestimable value in our efforts to raise money.

Up to the present time approximately eighteen hundred children of Portage county have been examined in the schools. One examiner working with a nurse examines on an average twenty-five children in a day. There follows a report of the results of these examinations:

Total Number of Children Examined, 1,880.

Defects Located	Percentages
Diseased Tonsils	50½
Adenoids	42½
Circumcision	15
No Vaccination	46
Defective Vision	24¼
Defective Hearing	15
Mal-Nutrition	18
Abnormality of Heart	18½
Abnormality of Lungs	14
Goitre	15½
Enlarged Cervical Glands	30
Rhinitis	2
Flat Foot	9

On the same day of examination we send to the parents a notice calling their attention to any physical defect found, together with a letter encouraging them to visit their family physician and secure his advice. The Portage County Medical Society recently adopted a resolution making it possible for parents to bring their children to them with the school notice, and receive free examination and advice. This action on the part of the County Medical Society has been of great assistance in our efforts to bring the parents to their usual medical advisor.

ORTHOPEDIC WORK

With the assistance of the Portage County Medical Society, Portage County Chapter Red Cross, Child Welfare League, and school survey, we have located eighty-seven crippled children. On October 20th, 1920, and again on February 16th, 1921, orthopedic clinics were held at Ravenna to which crippled children of the county were invited. With Dr. Clarence Hyman of Cleveland, acting as consulting orthopedist, forty-four children were examined, a diagnosis and recommendation as to treatment made in each of the forty-four cases. A report of the diagnoses made at these clinics is interesting in that it gives one an idea of the great variety of causes of orthopedic conditions.

Condition	No. Found
Infantile Paralysis	13
Club Foot	4
Potts Disease	3
Bow Legs	3
Scoliosis	2
Spastic Paralysis	2
Cleft Palate	2
Osteomyelitis	2
Retardation	2
Bursitis	1
Ankylosis	1
Spina Bifida	1
Pseudo Hypertrophic Muscular Dystrophy	1
Recurrent Subluxation	1
Volkman's Contracture	1
Congenital Absence of Radius	1
Congenital Lues	1
Faulty Posture	1
Gonorrheal Ulcer of Eye	1
Imbecile	1
No Disease	1

The following recommendations as to treatment were made by Dr. Hyman:

Orthopedic Surgery	21
Muscle Training	5
Cleft Palate Surgery	2
Throat Surgery	1
Wassermann Test	3
Feeble Minded Care	2
General Care	5

The holding of the survey and clinics, however, is but a start, and the real success of a survey of this kind can be measured not by the number of children examined, but by the results of the follow-up work on the cases brought to light. Ten cases recommended for operation have undergone operative treatment as recommended, their care sponsored either by the State Board of Charities, or at their own expense when able to do so. Operative treatment was refused in but three cases. The remaining nine cases will receive operative treatment as soon as funds can be provided.¹

Through co-operation with the Children's Hospital at Akron, we are planning on a series of muscle training classes for those cases in which this treatment was recommended. Our plan at present contemplates sending one of our nurses to the Akron Clinics with the children until the nurse has mastered the elements of muscle training sufficiently to warrant her continuing with the training at home.

We are indebted to the Ohio Society for Crippled Children, who supplied a nurse to make social histories of these cases.

TRACHOMA

During the week of January 10th, 1921, the eyes of six thousand four hundred and thirteen school

1. October 12, 1921.—Eighteen cases have now received operative treatment.

children were examined for trachoma by physicians detailed for that purpose by the State Department of Health. Although but ten cases were located, they all appeared at a Trachoma Clinic held in Ravenna on January 20th, and received free operative treatment from Surgeon Downs of the United States Public Health Service. *Surgeon Downs used the Grattage method of operation, and within two weeks from the date of the clinic each one of the ten children had been returned to school cured.*

TUBERCULOSIS

With the assistance of the Ohio State Sanatorium, eight Tuberculosis Clinics were held in various parts of the county during the week of February 28th, 1921. Two hundred and forty-seven patients were examined. Prospective patients were located through visits of public health nurses to the local physicians and schools. Of the two hundred and forty-seven examined, twenty-two were positively diagnosed as being tubercular, seventy-one had chest findings or other symptoms which were suspicious, requiring observation for temperature, weight or other evidence of the disease. The cases positively diagnosed have been excluded from school. The nurses of the county are assisting in the follow-up work, with a view to obtaining Sanatorium treatment or adequate home supervision in all of the positive or suspicious cases. We have insufficient personnel, and sanatorium facilities, however, to make our follow-up work in the field of tuberculosis satisfactory.

SURGICAL CLINICS

Following the examination of a large number of school children, and the notification of parents of conditions found, it is a known fact that a very small percentage of cases are taken to their family physician, and in the case of diseased tonsils, in particular, few receive operative treatment. Believing this to be due in large part to the lack of facilities, where cases can receive treatment at a minimum of expense, we are attempting to meet this problem by making facilities available. By way of experiment we conducted Tonsil and Adenoid Clinics at the Portage County Hospital on March 29th and 30th, using the following plan:

Parents having children requiring tonsil and adenoid operations were requested to notify the Board of Health what local physician doing that type of work they would prefer to have operate their case. As a sufficient number of requests appeared to make it advisable, arrangements were made with the surgeon to conduct a clinic. The maximum fee for all cases was twenty dollars. The expenses of the clinic were guaranteed by the Public Health League, and people who were unable to pay for the operation were permitted to have the case cared for at the clinic. The surgeons of the county had previously informed us that they could handle a maximum number of twenty cases

during the day, and we hired them at a rate of one hundred dollars per day to take care of all cases up to the maximum brought to them. We secured anesthetists at the flat rate of fifty dollars per day, and by special arrangement with the hospital we were able to conduct the day's clinic at the rate of fifty dollars per day.

Because of the inability of the hospital to handle a very large number of cases we held a half-day clinic on March 29th, and another half-day clinic on March 30th. In all fourteen cases were operated, at a total expense of two hundred and twelve dollars. We received from the parents one hundred and sixty-five dollars, making the cost to the Public Health League forty-seven dollars. In this way nine children were operated, whose parents were able to pay something, and five children received free treatment. This method worked out so satisfactorily that we are contemplating its use during the summer vacation.²

COMMUNICABLE DISEASES

For purposes of quarantine only, we have a deputy sanitary officer in each Township. Physicians report quarantinable diseases to them by telephone, thus making it possible to placard the house immediately. The physicians also forward by mail, or telephone, a report to the county office. If the case is reported as scarlet fever, diphtheria, chicken or smallpox, a personal investigation is made by the Health Commissioner. Measles, whooping cough and chickenpox are released from quarantine by mail, while diphtheria, scarlet fever and smallpox are released only after an investigation by the nurse or health commissioner. While we cannot say that the physicians of the county are reporting one hundred per cent. of their notifiable diseases, there is a noticeable improvement in the ratio between reported cases and deaths over conditions that formerly prevailed.

One experience in our efforts to control communicable disease is not only interesting but indicative of what is possible when a high degree of co-operation exists between the community, the physicians and the health authorities. This experience contemplates the quarantining of suspicious, as well as positive cases, and the restriction of contacts.

During the Christmas vacation a child in one of our villages developed scarlet fever. The case was not seen by a physician, and was not reported by the head of the family. The child was permitted to mingle with other children with the result that within one week there were six new cases of scarlet fever as the result of exposure to the one original case. In the meantime school had resumed its regular sessions, and we immediately instituted a daily examination of the throats of all children attending the school, quarantined every child who was sick with suspicious symptoms that might in any way be con-

2. October 12, 1921.—Sixty-seven tonsil and adenoid operations performed to date, 14 of them charity cases.

sidered suspicious of scarlet fever. During the following week it developed that three of the children already under quarantine showed signs of scarlet fever, and after that time but six more cases of scarlet fever appeared, each one of these appearing in families where the disease already existed.

Scarlet fever is admittedly one of our most difficult diseases to control, and its spread can be prevented only by quarantine and observation of the suspicious as well as the positive case.

DAIRY INSPECTION

It is true of any rural community, that without a measure of supervision of milk production the greater part of the milk that is produced under sanitary conditions is consumed in adjacent urban centers, the people of the county where the milk is produced being dependent in large measure upon those producers who do not meet city requirements. It is also true that many dairymen become resentful at the assumption of police powers by Boards of Health, and consider their actions as an infringement on their personal liberties.

Having an unbounded faith in human nature, and believing that the great majority of people are desirous of working together for the common good, we are endeavoring to improve the milk supply of Portage County by educational means. We first called a meeting of the retail milk dealers and discussed the situation with them. As a result of this meeting the dealers contributed to a fund to provide for milk analysis. The State Department of Agriculture has aided with a dairy inspector. About seventy-five dairies have been inspected and up to the present time it has been necessary to reject the milk from but two dairies where there was evidence of an unwillingness to cooperate. During the first month of milk production supervision the quality of milk distributed in the county showed an improvement of ninety-six percent. as determined by laboratory analysis.

Since that time there has been a steady improvement in the product.

SANITATION

While we have not the facilities for making a complete sanitary survey of Portage County, we are attempting to correct the two principal sources of disease due to unsanitary conditions, namely, the *contaminated well*, and the *old-fashioned privy*, by educating the people of the community in the proper methods of constructing and maintaining these necessary elements of rural life.

There are numerous phases of public health work in its modern conception which we have been unable up to the present time to undertake. I have already referred to the lack of sanatorium facilities for the tubercular and pre-tubercular. While some of our schools are conducting nutrition classes, supplying milk during the school

session to those children who are found under weight, we will never meet the tuberculosis problem adequately until institutions are readily available for the isolation and instruction of the active case.

While our school inspection records show that about ninety per cent. of our school children are in need of dental treatment we will never be efficient in oral hygiene until free dental facilities can be made available to all.

In short, there are so many features belonging in a public health program that are lacking in Portage County that we do not care to consider our present endeavors as being in the nature of a health demonstration. It may be well that we are limited in our facilities, and thus forced to move slowly. We cannot successfully force a community into a preventive medicine program, but we can gradually develop a realization of the need for action. Time will eventually aid us in determining whether or not the majority of rural people desire positive health improvement or negative disease prevention.

PROPAGANDA FOR REFORM

More Misbranded Nostrums.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the curative claims made for them were unwarranted: Hoffman's Celebrated Mixture (Solomons Co.), essentially an alcoholic solution of copaiba and opium. Aspironal (Aspironal Laboratories), essentially a solution of sodium salicylate; cascara, a small amount of mydriatic alkaloids and a trace of menthol. Lozon Pills (Lafayette Co.), consisting essentially of ferrous carbonate, nux vomica, damiana, arsenic and a laxative plant drug. La Nobleza and Sin Igual (Juan Gandara), the first, a solution containing plant extractives, including saponin (sarsaparilla), a plant laxative, sugar, alcohol, water and traces of alkaloids; the second, a watery solution containing gum, a plant laxative, licorice, and faint traces of alkaloids. Silverstone's Internal Remedy (H. Planten and Son), capsules containing resins and volatile oils, including copaiba and cubebs. Yellow Pine Compound (Yellow Pine Extract Co.), consisting of turpentine mixed with magnesium oxid and a small amount of jalap. Thomas Emmagogue Pills (Palestine Drug Co.), consisting essentially of ferrous sulphate, aloes and an unidentified alkaloid. Nyal's Prescription "23" and Nyal's Prescription "23" Pills (Nyal Co.), the first, a liquid consisting essentially of zinc sulphate, boric acid, Golden Seal, glycerin and water; the second, consisting essentially of ferrous sulphate, copaiba balsam, oleoresin of cubebs and alkaloidal material.—(*Jour. A. M. A.*, Aug. 6, 1921, p. 481.)

Latent Tonsillar and Peri-Tonsillar Abscess*

By EVAN G. GALBRAITH, M.D., Toledo

Editor's Note.—While Dr. Galbraith does not feel that his series of twelve cases, herewith presented, is large enough to warrant him in making definite conclusions, he does feel justified in making the following deductions: (1) A tonsil may have in it or around it a definite abscess without local manifestations of its presence; (2) all patients in whom such abscess was found, presented systemic conditions of greater or less severity; (3) as a corollary to these deductions it might be added that in most cases some systemic condition rather than the examination of the tonsils will give the best indications for tonsillectomy.

IT IS an established fact in clinical medicine that a disease process in one part of the body may be secondary to a similar process in some other and often distant part. It is also true that the progress of such a condition is often checked or the condition cured when the original source of trouble is eliminated. Such observations have led to the work on focal infections that has almost revolutionized medicine during the past few years.

THE ROLE OF THE OTO-LARYNGOLOGIST IN FOCAL INFECTIONS

In a recent article on "Focal Infections and Arthritis" Dock states that we are now passing through a period of reaction in this phase of medicine because it has not proved the panacea the more enthusiastic early writers thought it would. Yet in this same article he reports two cases of arthritis that were cured by the removal of bad tonsils;—one in an unusually short time, the other after a more stormy convalescence.

A great deal of work remains to be done before the last word on focal infections is written. There are many important phases to the subject and not the least is the early detection and removal of the original focus before irreparable damage is done or secondary foci, which on account of being located in more vital or less accessible parts cannot be removed, are formed. As oto-laryngologists we frequently take part in this search for some focus of infection to account for symptoms which the patient presents and which can be accounted for on that basis. The parts with which we are most concerned are the nasal accessory sinuses and the faucial tonsils. While the sinuses play an important role in the matter of focal infections it is the tonsil that is dealt with in this paper.

LATENT ABSCESS

Given a patient with some systemic condition that can be accounted for by some focus of infection and a history of repeated attacks of tonsillitis or peri-tonsillar abscess it is not difficult to convince the patient or his physician that tonsillectomy is indicated. Nor do we have any hesitancy in giving such advice. On the other hand take the patient with the systemic condition and indefinite or no history of trouble referable to

the tonsils and we have a very different problem for solution. In the case of the sinuses and teeth we have the X-ray as a valuable adjunct in making a diagnosis but at the present time have we any means of examination that enable us to state definitely that the tonsil is not harboring the infection that is causing the trouble? We have repeatedly observed a condition which convinces us we have not. That condition is the presence of an abscess or abscesses either in the tonsil itself or closely associated with it, without local manifestations that lead to a diagnosis before its removal. True the tonsil was suspected of being the offending agent or it would not have been condemned but in not one of our cases of this type was an abscess suspected.

The above condition is not to be confused with that so often seen in tonsils where lymph containing caseous material or even pus can be expressed from the crypts. It is a definite circumscribed abscess and so far as could be demonstrated without communication with the surface through the crypts.

This is not a discovery of a new condition. On the contrary it has probably been encountered by every one who has had any extensive experience in tonsil work. Yet for some reason no one has seen fit to give it the consideration it deserves. Doubtless many such cases are overlooked because the field of operation is obscured by blood and the pus is not seen or the tonsils are not examined carefully after removal. Our best textbooks and monographs simply state that such a thing may exist or dismiss the matter with a few perfunctory remarks. The literature bearing on acute peri-tonsillar abscess is quite voluminous yet in making a careful search of the literature for the past ten years on tonsillar conditions only one case of this kind was found reported. It was assumed that the most careful tonsil work has been during that period. Prenn, of Boston, reported such a case in February, 1917. His patient was an adult suffering from a rheumatic condition. Except for a mild attack of tonsillitis eight months previously there were no symptoms referable to the throat. He also states that with the exception of the anterior pillar being adherent the tonsils were normal in appearance and consistency. On sectioning one tonsil a definite abscess was found. No mention was made as to what the organism was. The patient's condition promptly improved.

*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

ILLUSTRATIVE CASES

During the past two years we have seen twelve such cases. All except three of these patients were adults. The ages of the children were sixteen, ten and nine. When one considers the relative number operated it is readily seen to be much more common in adults than children.

The *first case* was that of a woman, fifty years of age, who came complaining of general malaise, lack of endurance, and a loss of thirty pounds in weight during the past year. She gave a history of an attack of tonsillitis two months before the examination. The tonsils were of the small buried type with the anterior pillars very adherent. This was especially true of the right near the upper pole. The remainder of the ear, nose and throat examination showed nothing abnormal. After a complete examination by a competent internist, who could find no other cause for her condition, tonsillectomy was advised.

During the removal of the right tonsil a definite abscess containing thick creamy pus was found in the supra-tonsillar fossa. An abscess containing pus similar in appearance was found in the left tonsil near the capsule. Cultures showed diplococci and staphylococci.

When seen five months later all symptoms had disappeared and she had gained twelve pounds in weight. She was then taking care of a truck garden as had previously been her custom.

The *second case* was that of a married woman, thirty-four years of age, referred to us by Dr. Sasse, whom she had consulted on account of loss of weight, lack of endurance, extreme nervousness, tachycardia, and palpitation.

The family history was negative so far as her present condition was concerned. She had always been below weight and about seven or eight years ago began to have stomach trouble. This consisted of a distress in the stomach coming on a short time after eating and relieved by vomiting. She was unable to eat many of the coarse, less easily digested foods. In June, 1920, she had a profuse hemorrhage from the stomach and the above symptoms dated from that time. She said she had never had tonsillitis though she knew her tonsils were bad. She had often recovered foul-smelling and tasting caseous material from the crypts.

After a period of rest in bed and high caloric diet her condition—typical of hyperthyroidism—had improved and she was advised to have her tonsils and some bad teeth removed.

On November fifth the tonsils were removed under local anesthesia. Both tonsils were moderately enlarged and very adherent about the center. Just beneath the capsule of each tonsil were multiple abscesses about the size of a small pea. Cultures taken from these showed pneumococcus, staphylococcus, streptococcus, and short rod bacilli present. The pathological diagnosis on the tonsils was "marked lymphoid hyperplasia, pus in crypts and little fibrosis."

When seen one month later the patient's condition showed marked improvement. There was less nervousness and tremor, her endurance was much better, the pulse was not so rapid and she had gained six pounds in weight. Four months later or five months after the operation showed the patient's condition much improved and a marked reduction in the size of the right lobe of the thyroid gland. Between these examinations she had had four ulcerated teeth extracted.

The *third and last case* we wish to report in detail was a nine year old boy referred to us by Dr. L. C. Grosh. He had been consulted because the boy had been having periodic rises in temperature. The patient had been a normal infant and had remained well up to four years of age when he had a severe attack of anterior poliomyelitis with high fever and delirium but with only slight ataxia as a sequence. Two months before this examination he had had diphtheria with good recovery. One month later he had acute follicular tonsillitis complicated by joint pains, rapid pulse and forceful apex beat but no evidence of valve destruction. Recovery from this was slow but fairly good. Between this attack of diphtheria and tonsillitis he had short spells of fever the cause of which was not determined. He gained some in weight but always was thin, somewhat pale, nervous and jumpy.

Examination showed slight pallor, some choreiform movements, and enlarged tonsils without external evidence of infection. The examination was otherwise negative.

The adenoids were unusually large. The tonsils were medium sized and buried. The upper poles of both tonsils were large and the right contained a definite abscess. Cultures showed the organism to be pneumococcus. The pathologist reported chronic purulent inflammation of tonsils and adenoids. One tonsil—the right—showed marked fibrosis and an active infective process extending into the capsule and muscle tissue.

The patient stood the operation well and when last seen two months later showed marked improvement in his condition. He was brighter, had better color, was gaining in weight steadily, and no longer presented the nervous symptoms above mentioned.

BACTERIAL FINDINGS

A culture was made from the pus in eight of these twelve cases and in every one the pneumococcus was found. Five showed staphylococcus, three streptococcus, two the fusiform bacillus and one saprophytic organisms. In no case was a pure culture found. Unfortunately the type of pneumococcus was not determined. The result of this bacteriological work is all the more important since four of the examinations were made in one laboratory and four in another.

Prior to operation none of the tonsils presented the characteristic signs of containing an abscess and in no case was a history of acute peri-tonsil-

lar abscess obtained. If the abscess was in the tonsil substance it was always located in the upper pole. If around the tonsil it was found either in the supra-tonsillar fossa or in the sulcus about the middle of the fossa where the palato-glossus and the palato-pharyngeus muscles seem to cross. Until it is determined exactly how a simple follicular tonsillitis originates the origin of the abscess must remain a matter of speculation.

Every case in which the abscess was found presented some systemic condition of greater or less severity pointing to a focus of infection in some part of the body. In one it was a severe nephritis. In another it was hyperthyroidism and in still another it was a condition simulating a mild form of chorea. However the most common complaints were a feeling of general malaise, lack of endurance, loss of weight, a moderate

degree of anaemia, and periodic rises in temperature.

DEDUCTIONS

While the series of cases here presented is not large enough to warrant one in making definite conclusions one does feel justified in making the following deductions:

1. A tonsil may have in it or around it a definite abscess without local manifestations of its presence.

2. All patients in whom such abscess was found presented systemic conditions of greater or less severity.

3. As a corollary to these deductions it might be added that in many cases some systemic condition rather than the examination of the tonsils will give us the best indication for tonsillectomy.

515 NICHOLAS BLDG.

Chylous Ascites: With a Report of Four Cases*

By M. A. BLANKENHORN, M.D., Cleveland

Editor's Note.—From a study of the literature, the reports of other observers and his own cases, Dr. Blankenhorn concludes that fat is always the cause of the turbidity of the fluid found in chylous ascites; that it occasionally is so disposed in a coarse emulsion that a creamy layer arises on standing, and that in other instances the emulsion is so fine and so fixed that the usual methods of isolating fat are not successful. Two peculiarities of chylous fluids may be mentioned, namely, absence of heat-coagulable protein and unusual resistance to bacterial action. Chylous ascites may complicate tuberculous or non-tuberculous peritonitis, thrombosis of the subclavian vein, carcinoma of the omentum or peritoneum, cirrhosis of the liver, nephritis, and pleurisy.

MILKY ascitic fluids are found with no great infrequency in a diversity of pathologic conditions that may cause accumulations of fluid in body cavities. These pathological conditions may be divided into three groups: *First*, those in which obstruction of the lacteals or thoracic duct can be demonstrated and the resulting fluid proved by examination to contain emulsified fat, sugar, and other constituents of chyle; in such we have a true chylous ascites. *Second*, degenerating tumors or cysts, which may discharge an accumulation of cell debris or cholesterolin into a cavity filled with serum, producing a turbid mixture that can be shown to contain no emulsified fat or any other constituent of chyle. Cysts alone may produce the same phenomenon. These accumulations of fluid are quite definitely *not chylous*, as can be shown by settling and clearing them by gravity or by finding large amounts of cholesterolin and cell fragments. They may as well be called *chyliform* as anything else, and some writers, especially French and Italians, refer to such fluids as milky. *Third*, there has been a large group of case records accumulated, principally chronic diseases of the liver, kidney or peritoneum, in which turbid fluid resembling chyle has been disclosed, but the microscopic ex-

amination and chemical analysis have failed to demonstrate any suspension of fat or any other cause for turbidity. In the absence of demonstrable fat, these fluids are most commonly called chyliform. As yet no one has definitely found the origin of such fluids or explained the chemical or physical nature of the substances causing turbidity.

EXPLANATION OF TURBIDITY

Some writers ascribe the turbidity to lecithin, others to the combination of lecithin and globulin (Joachim). Lion described a body which he called a glycoprotein. Marrack thinks that the turbidity here is due to lipoids physically combining with proteins in such a manner that they do not behave as they do in chylous fluids. Some investigators choose to limit the term chylous to such fluids as can be found to follow lesions of the lacteals or thoracic duct. A strict limitation of the term certainly makes for clarity. But other investigators, after working with chyliform fluids, are convinced that lipid substances are present differing only from the usual lipid of chyle in their physical disposition. Although proof is not complete, this assumption is often borne out by clinical progress of the patient furnishing such a fluid. This point of view seems especially well taken in those cases in which serial tappings disclose fluids which on one

*Read before the Medical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

occasion show marked turbidity and very apparent emulsified fat—that is, they are definitely chylous. On other occasions when turbidity diminishes, no demonstrable fat is available—that is, they are chyloform. It is also seen that many of the chyloform fluids on standing a long time at room temperature develop globules of fat large enough to be easily demonstrated. These fat globules may rise spontaneously to the top or be centrifuged to the top.

STATISTICAL SUMMARY

In 1900, Batty Shaw summarized the literature on this subject, and collected records of 115 cases of milky ascites, 71 of which were said to be chylous, 33 chyloform, and 11 doubtful. Of the chylous, compression of the thoracic duct by tuberculous glands or neoplasms was given as the cause most frequently, but in 18 cases only. Non-tuberculous peritonitis, thrombosis of the subclavian vein and carcinoma of the peritoneum were next in order of frequency. Tuberculous peritonitis, carcinoma and cirrhosis were most often ascribed as the cause of the chyloform.

Fifty-four cases of milky hydro-thorax were found, 31 said to be chylous and 23 chyloform. External violence, carcinoma of the pleurae, blockage of the subclavian vein, compression of tumors are mentioned most frequently as causing the chylous. The chylous form of hydro-thorax was said to be due to tuberculous pleurisy, non-tuberculous pleurisy, and carcinoma.

In 1905, Boston summarized 126 collected cases, many of which had been cited by Shaw. He did not attempt to divide them into chylous or chyloform. As to cause he finds that in 24 cases they occurred with cancer; in 17 with tuberculosis; in 11 with valvular heart disease, and in 11 with obstruction of the thoracic duct. In 13 cases no cause was found although autopsy was done.

Both these reviewers did not find nephritis frequently associated; but many isolated reports have since shown the two conditions commonly associated. This association is mentioned in Bright's Reports of Medical Cases.

FAT IN COARSE AND FINE EMULSION AS THE CAUSE OF TURBIDITY

Among the various physicians who have reported these cases, there is, in general, no agreement as to what is to be called true chylous ascites, just as there is no agreement among pathologists and chemists as to what is the cause of the turbidity.

Sometimes when liberal amounts of fat can be demonstrated but no lesion of the lacteals, the reporter calls the fluid chyloform; at other times when very small amounts of fat are extracted, the lacteals can be shown to be obstructed. It is very clearly shown, however, that in certain cases of nephritis, a chronic form of peritonitis has followed, in which very minute varices of the lac-

teals in the intestine and mesentery have been demonstrated. From such patients turbid ascitic fluid has been obtained, in some instances a fluid that develops a creamy layer, which contains sugar, proteolytic and amylolytic ferments, and other elements common to chyle; in other instances, fluids that have no creamy layer and no sugar and no ferments. It is also apparent that the amount of turbidity is not a measure of the fat content, nor is the development of a creamy layer dependent on the amount of fat. Furthermore, it does not follow that, when large amounts of fat are present, it is more readily extracted by ether, petroleum ether or other solvents.

From the information gained from various reports, and as directly stated in some, it appears that fat is always the cause of the turbidity, that it occasionally is so disposed in a coarse emulsion that a creamy layer comes up at once, and that in other instances the emulsion is so fine and so fixed that the usual methods of isolating fat are not successful. Two peculiarities of these fluids are also mentioned; *viz.*, the absence of heat-coagulable protein and the unusual resistance to bacterial action.

The writer has recently had the opportunity of observing four milky fluids, three of them from patients with chronic nephritis in whom tapplings in rapid succession were made, and a fourth from a case of cardiac stasis resulting in ascites which had a milky appearance. From examining these fluids when freshly tapped and after long standing, by various chemical and physical manipulations, it is my opinion that true fat is the cause of the turbidity, and that the fat is physically so disposed that it cannot be centrifuged, extracted, seen with the microscope or demonstrated in other ways peculiar to emulsions. The clinical records of these cases, together with a few of the methods of examination which have led to these conclusions, will perhaps be of most interest to this assembly.

ILLUSTRATIVE CASE REPORTS

CASE 1.—A Jewish woman, aged 33, admitted on October 26, 1920, complaining of nephritis and diarrhea. Her illness had begun 11 weeks before, appearing first as a swelling of the feet, which progressed in a few days to a general anasarca, there having been no previous illness except sore throat, said to be tonsillitis, a few weeks before. She was very oedematous, particularly in dependent portions. The abdomen was much distended with free fluid, and there was fluid in both pleural cavities, and many râles in both lungs, but no demonstrable cardiac stasis. Paracentesis was done the second day and 700 c.c. of milky fluid removed from the left chest. At this time she was voiding 375 c.c. of urine daily, which had a very high specific gravity, 15 gm. of albumin per liter, and many finely granular and hyaline casts. The week after admission the right chest was tapped and 800 c.c. of similar fluid removed. Two days

later the abdomen was tapped and 3 liters of similar fluid was removed. With the thorax and abdomen evacuated quite dry, no disease of the pleura could be defined, and nothing unusual could be palpated about the abdomen. Six days later, both chests were tapped and 800 c.c. removed from the left and 500 from the right. The fluid resembled that previously obtained.

The patient always had complete relief from paracentesis, but during her stay in the hospital, the pulse rate gradually increased until it averaged 110. She became very short of breath, especially when the body cavities were filled with fluid. No improvement was seen in the urine, and at the request of the patient's family she was relieved from further treatment and was taken home November, 1914, where she died about two weeks later.

The diagnosis was chronic parenchymatous nephritis.

CASE 2.—Colored boy, aged 24, who was transferred from the City Hospital, by the courtesy of Dr. Scott, as a case of chronic nephritis with chylous ascites. The patient dated his onset back to February, 1920, when he became ill with pains in the lumbar region associated with oedema of the scrotum, face, ankles, arms and forearms. A month after the onset of his general oedema, his abdomen swelled and after about a month it was described as being very tight. During April and May, while he was in a southern hospital, paracentesis was performed four times and a large amount of milky fluid removed. He has had total disability since the onset of the disease, either as a patient in the hospital or as a convalescent at home, where he swells up with the oedema whenever he becomes very active. His history discloses nothing to suggest a cause for this nephritis. When admitted to Lakeside Hospital, he was confined to bed by general anasarca. His blood pressure was S. 130, D. 90, and his urine was then at about a liter output per day, with a specific gravity of 1.020, with a large amount of albumin and no renal elements. He was distinctly anaemic, having a red-blood count of 1,350,000, and a haemoglobin index of 50 per cent. He eliminated 45 per cent. of phthalein in two hours, and by the two-hour specific gravity test he had a maximum variation of 10 points, the highest being 1.025 and the lowest 1.015. His abdomen was tapped on account of extreme distention three days after admission and 3800 c.c. of milky fluid evacuated. He was placed on a salt-free, low-protein diet and kept in bed, and considering the long duration of his illness and its apparent severity, he made a good recovery and was discharged within five weeks very much improved, with a diagnosis of chronic nephritis.

Since discharge this patient has been under observation in the out-patient clinic, having reported nine different times since the first of January. He was tapped once in the Dispensary and 840 c.c. removed, but no great change in the

contour of the abdomen could be demonstrated, there being considerable tympanites found. His blood pressure is sometimes as high as S. 170, D. 120, and he also has more albumin in the urine than when discharged from the hospital. On his last visit four months after being discharged, he had a phthalein output of 47 per cent. in two hours, and the specific gravity of his night urine was 1.016, and of the morning specimen 1.009.

CASE 3.—This patient, a Polish miner, has been in hospital, except for a month's interim, since June, 1920, with total disability on account of chronic nephritis and recurring ascites. Originally he had difficulty principally in eliminating water, for his output of phthalein and the nature of his urine disclosed very little evidence of nephritis, and he was investigated very diligently for other cause for retention of body fluids, especially diseases of the lymphatics or veins or tumors of his abdomen. He now eliminates water better but has a very low phthalein and fixation of the specific gravity of his urine, with a little albumin and many casts. He has been tapped 22 times, always for from 9 to 12 liters of milky fluid. He has lost in weight and strength, but when he remains in bed he has little oedema. At times his fluid accumulates very rapidly, and again he has gone a month untapped. At present his diagnosis is chronic nephritis, and his accumulation of ascites is ascribed to a chronic fibrosis of his mesentery and peritoneum, occasionally seen in nephritis.

CASE 4.—Man, aged 32, admitted November 29, 1920, complaining of oedema of the legs and shortness of breath and swelling of the abdomen. This man gave a history of having been wounded in battle September 28, 1918, being shot by a machine gun in the thigh. After about six weeks, he was found to have an enlarged heart with signs of aortic regurgitation and arterio-venous aneurysm in his thigh. He was tapped about 40 times for large amounts of fluid, and according to his own story the fluid at times was perfectly clear and at other times distinctly turbid but never milky. The specimen that was tapped at Lakeside Hospital amounted to 11 liters of amber-colored fluid, which was distinctly milky.

TABULATED RESULTS OF CHEMICAL EXAMINATION

For convenience I have briefly tabulated the results of the chemical examination of a specimen from each case, and of Case 3, from whom I have 22 specimens, I have given the extremes.

CASE 1	Average of abdomen and both chests
Sp. gr. 1.010	Gm. per 100 c.c
Total N	.140
Sugar	.100
Urea	.100
Chlorides	.625
Fat	.019
Total Solids	1.1

Creamy layer	0
Opalescence	++
Starch enzyme	0
Peptone, recent	0
Peptone, late	+
Clear by ether	0
Clear by $\frac{1}{2}$ sat.	+ ?

CASE 2:

Sp. gr. 1.010	Gm. per 100 c.c.
Total N	.595
Sugar	.130
Urea	.060
Chlorides	.750
Fat	.018
Total Solids	1.057
Creamy layer	+
Opalescence	++++
Starch enzyme	+
Peptone, recent	0
Peptone, late	+
Clear by ether	0
Clear by $\frac{1}{2}$ sat.	+

CASE 3:

Sp. gr. 1.006-1.012	Gm. per 100 c.c.
	Greatest Least
Total N	.490 .140
Sugar	.150 .060
Urea	.100 .060
Chlorides	.750 .200
Fat	.201 .090
Total Solids	2.9 1.8
Creamy layer	Usually present.
	Sometimes absent.
Opalescence	Variable ++ to +++++
Starch enzyme	+
Peptone, recent	Occasionally
Peptone, late	Always
Clear by ether	0
Clear by $\frac{1}{2}$ sat.	+

CASE 4:

Sp. gr. 1.008	Gm. per 100 c.c.
Total N	.170
Sugar	.060
Urea	.086
Chlorides	.680
Fat	.028
Total Solids	1.20
Creamy layer	+
Opalescence	+
Starch enzyme	+
Peptone, recent	0
Peptone, late	+
Cleared by ether	0
Cleared by $\frac{1}{2}$ sat.	+

COMPARISON OF FLUIDS OBTAINED

The specimens obtained from these cases are so nearly of one type that a general description does for all, but in their slight differences, as well as in common characteristics, interesting comparison can be made.

These fluids are all milky in appearance, varying from a distinctly turbid straw-color in Case 4 to a thick, almost creamy yellow seen often in Case 3. Centrifuging throws down a few cells, and in some specimens brings up a creamy layer, but none are cleared by it. Long-standing at room temperature has the same effect as centrifuging, except that more of a creamy layer appears with standing. Filtering through paper or even through a Berkefeld does not clear them. Under the microscope small fat globules are seen in abundance in some, as in Case 3, but very few in Case 4. After filtering through a fine filter, turbidity is less, and no fat is visible by microscope but Brownian movement is seen. A faint turbidity dialyzes readily from the fluids through collodion membranes, but turbidity apparently does not come to equilibrium. All of which shows that the particulate matter causing turbidity after large globules are removed, is in a finely divided state.

Heat-coagulable protein is present in two cases—3 and 4—but in case 3 only in later specimens where fat is diminished.

None of these specimens can be cleared by shaking with ether, which is said to be a test for turbidity due to particulate fat. Shaking with ether extracts an appreciable amount of fat, but has little effect on turbidity. In some instances a jelly-like mass results from contact with ether. Drying and powdering, followed by long extraction with petroleum ether in a Soxhlet extractor, removes distinctly more fat than does long shaking with ether, showing that fat may be present in abundance but ether does not extract it from the original fluid. Only small traces of lecithin and cholesterol were found.

In Case 3 the amount of fat was raised from 128 mg. per 100 c.c. to 201 by one week of a heavy fat diet, chiefly cream and butter.

It is interesting to point out that Case 4, with a fat content of 28, is less turbid than Cases 1 and 2, with a fat content of 19 and 18, respectively; also that Case 4, with a fat content of 28 mg. per 100 c.c., has a creamy layer, while occasionally specimens from Case 3, with 90 mg., have no creamy layer.

It is also significant that Case 4, with a protein-nitrogen of 56 mg. per 100 c.c. (which is a rough measure of the protein content), is coagulated by heat, while Case 3, with a protein-nitrogen of 80, has none.

From these comparisons, it can be inferred that the turbidity of these fluids is due to fat; in some instances, coarsely divided and weakly emulsified with protein, giving little turbidity; in other cases, finely divided and firmly emulsified to protein, and giving much turbidity. When the emulsion is coarse, a fatty layer comes up, and protein is then available for heat coagulation; when the emulsion is very fine, no creamy layer comes up, and protein, being used in the emulsion, is not heat-coagulable.

Further Studies in the Unexplained Morbidity of the Puerperium: Report of a Case*

By ANDREWS ROGERS, M.D., Columbus

Editor's Note.—Occasionally, when an obscure or puzzling case is encountered, as much can be learned from studying it as from reviewing a large series of cases that speak for themselves. After reading the detailed report of Dr. Rogers' case the reader is left to its solution.

I WISH again to call your attention to the general question of unexplained puerperal morbidity. And it is perhaps quite unnecessary to mention that the term *puerperal* is here used in that general sense commonly accepted by obstetricians, and allowed to apply to the overlapping periods of pregnancy, labor and the puerperium.

It is estimated, from the latest reports of the registration area of the United States, that twenty thousand women died in connection with childbirth in 1920, not to speak of the thousands who were seriously ill or permanently invalided as a result of parturition. Even a very small percentage of unexplained morbidity in any such total number as this must therefore "be of interest and importance to the more serious minded obstetrician." And it is of further interest and importance since as Polak says, "one cause of the relatively high mortality in these puerperal cases is a confusion as to exact diagnosis in any given case."

Last year in furtherance of this view, I came before you with a carefully prepared thesis, founded upon a series of observations that represented a definite percentage of a known number of cases. The etiology, the symptoms, the clinical findings and the course of the disease, together with the diagnosis, prognosis and treatment were given. In effect a *fait accompli*.

This year I am going to present to you the history of a single case. There was no definite diagnosis made, though there was much speculation by different physicians. I lay it before this tribunal confident that the discussion will enable me to close my record in a satisfactory manner which, up to this time I have been unable to do.

Since I have only this one history to report, I will venture to make it a little more discursive than is the stereotyped form.

ILLUSTRATIVE CASE REPORT

December 8, 1919. The patient is a primigravida, twenty-seven years of age. Her personal history is without obstetrical importance. Her menstruation began at the age of twelve. It is regular, of the four weekly type; lasts four to five days and is without pain. Her last menstruation began on the twenty-sixth of May, 1919; she felt motion in the middle of the month of October; and her estimated date of confinement was March 5, 1920.

She has been married about a year and there have been no miscarriages.

Physical examination revealed the cardiac area unchanged, the apex beat in the fifth interspace, three and one-half inches from the mid-sternal line. There were no murmurs. The breathing was unchanged. Both lobes of the thyroid were very slightly enlarged, but there were no vascular changes in the gland. The mucous membranes were scarlet and the teeth were in excellent condition.

The breasts were pendulous, firm, large and with well developed primary and secondary areolae and new striae. The gland tissue was apparently adequate; the nipples were erectile and in good condition and the colostrum was easy. The abdomen was spherically enlarged, the wall of moderate thickness and there were a few red striae. The kidneys were not palpable nor was the spleen. The appendicular region was also free from pain or tenderness.

The vertex was found to present and the back was to the right. The fetal heart was heard with greatest distinctness in the right lower quadrant. It was distinct and the frequency was 150.

The pelvic measurements were 27, 29 and 20+.

Vaginal examination revealed the genitals to be normal, the vagina slightly relaxed, the perineum and cervix uninjured and the latter not materially shortened, though soft.

There was no swelling or edema of the extremities.

This patient was the wife of a physician, an internist, who had supervised the case up to this time and who undertook to look after the urine and blood pressure and report to me. This he did and I received his written reports each week. They were all without significance until January 21.

I found his report in the evening mail of that date, and I will read it to you:

Urinalysis of Examined Jan. 20, 1920.

Color	Light yellow, clear.
Sp. Gr.	1,022
	Acid
Alb.	Faintest possible trace.
Sug.	Negative.
Mic.	Many epithelial cells.
	Few pus cells.

Blood Pressure

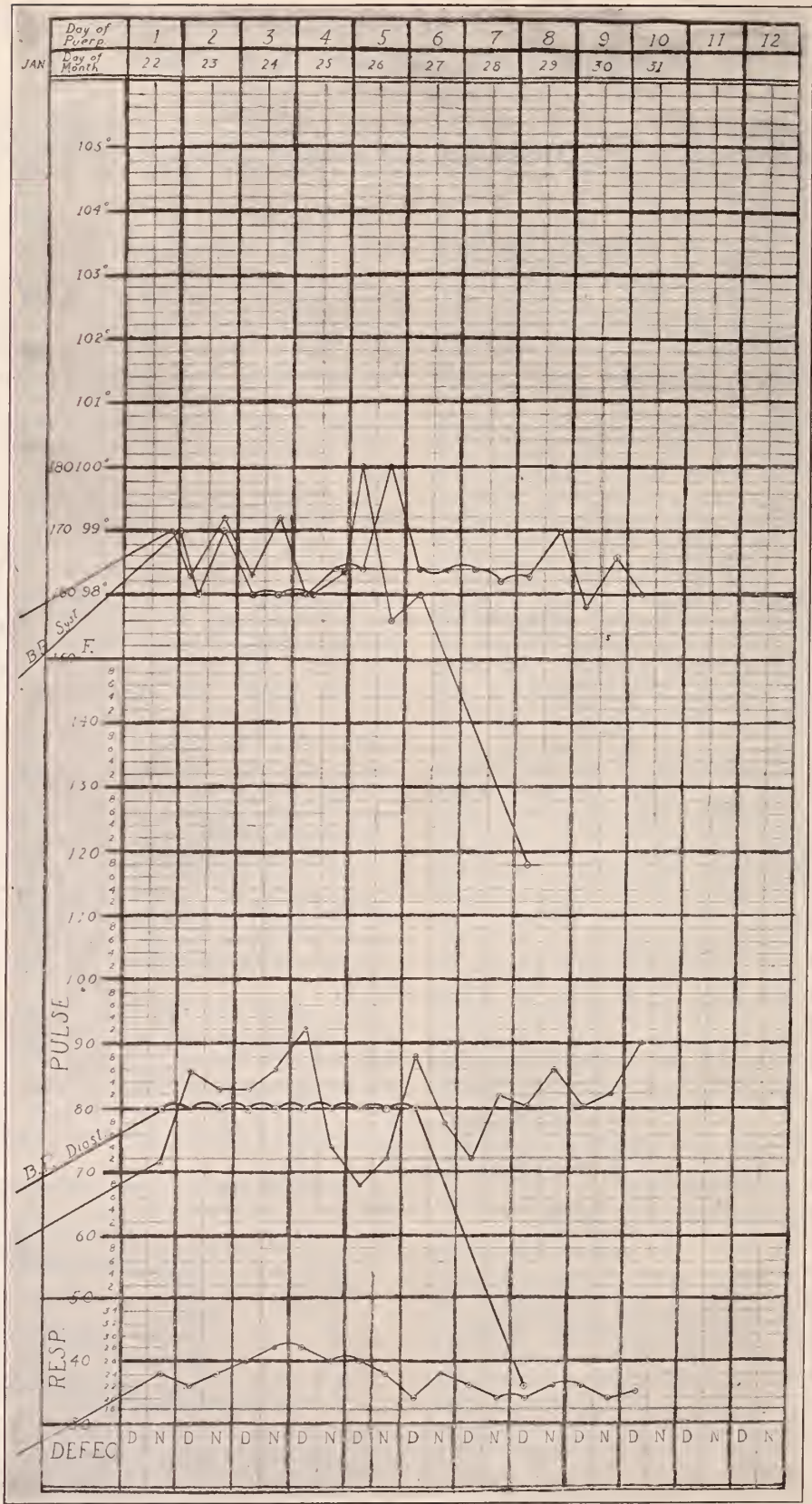
Systolic	145	Diastolic	80
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She feels very well and seems to be doing well.

Signed.....

I at once tried to get into communication with

*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.



the doctor but was unable to do so. I was called out on a case and did not get free until one or two o'clock in the morning and I remember that it was with a feeling of remissness that I crawled between the blankets making a mental note to reach the doctor the first thing in the morning. So when the telephone rang at about four o'clock, it was with some trepidation that I answered. It was the doctor to say that the membranes had ruptured and that his wife was having pains about every twenty minutes. To my inquiry as to her condition he replied that she was all right except worried about the viability of the baby. I told him that he had better take her at once to the hospital and I would meet them there. This I did and it was plain that he had not thought that there was anything to be apprehensive about in the matter of the blood pressure and the albumin.

EXAMINATION.—Upon admission at six o'clock, the temperature was 98.6°, the pulse 76 and the respirations 20. The blood pressure was systolic 160 and diastolic 90. A catheterized specimen of urine was negative, chemically and microscopically.

Vaginal examination showed the cervix dilated to two fingers and the head presenting in O. R. A. At 9:30 a. m. there was practically no progress. The pains were regular at about five minute intervals but without much strength.

At 9:45 a. m. the number three bag was introduced, without anesthesia, and in order to hasten delivery a little traction was made from time to time on the tube. At 11 a. m. it was pulled through but the cervix promptly contracted. At twelve o'clock the blood pressure was systolic 170, diastolic 100, and the respirations 28. A catheterized specimen was reported negative. Since there was no progress and delivery was greatly desired the number four bag was introduced and pulled through as rapidly as was consistent with the comfort of the patient. The bag came through the cervix with an audible snap. This rigid cervix was a source of great difficulty under the circumstances.

The patient delivered spontaneously without anesthesia at 2:21 p. m. The babe weighed five pounds and two ounces and was apparently a little past the seventh month of gestation and has thrived. The placenta was delivered at 2:30 p. m.

From this point on the chart will show you the progress of the case until the tenth day when she went home in an ambulance to be under the care of her husband and his internist friends.

LATER HISTORY.—During the ten days she was in the hospital the urine was examined repeatedly and was always absolutely negative; blood cultures were negative; Wassermanns were negative; lochial cultures were negative; the heart and lungs, examined by specialists in these fields were negative.

But the patient looked sick. There was especially a slight duskiness about the face, that

made one suspect the myocardium. But the heart experts were positive that this should not be accused. As I said, she looked sick and we were all concerned about her, despite the apparent lack of subjective symptoms. When the blood pressure dropped, she suddenly looked much better.

At her post-partum visit on May 17, the vaginal examination showed the perineum intact and the vaginal grip excellent. The cervix was not lacerated and in the *cul de sac*. The uterus was in ante-version and flexion, very slightly larger than ordinary, but firm and not tender.

Her physical examination was absolutely negative and so were all clinical findings.

What was the matter with her? What should the final diagnosis be? And why?

188 E. STATE ST.

New and Nonofficial Remedies

One of the most important developments in the Medical history of the past five years has been the work of the Council on Pharmacy and Chemistry of the American Medical Association. Their examination and analysis of newer remedies has done much to advance the standard of manufacturing pharmacy; in safeguarding the physician against inferior products and indicating those for which misleading claims are made. The cooperation of the doctor in using and prescribing Council-Passed products is making this work more effective each year, and the cooperation of the manufacturers is an encouraging recognition of the value of this service. The following is a list of articles accepted by the Council during September for inclusion in New and Nonofficial Remedies:

The Abbott Laboratories.—Procaine-Adrenalin Hypodermic Tablets No. 2. Dry Milk Co.—Protolac. Hynson, Westcott and Dunning.—Tablets of Benzyl Succinate-H. W. and D. Intra Products Co.—Ampules Ven Sterile Solution Mercury Oxycyanide 0.008 Gm. Ampules Ven Sterile Solution Mercury Oxycyanide 0.016 Gr. Lederle Antitoxin Laboratories.—Acne Combined Vaccine. Mead Johnson and Co.—Casec. N. Y. Intravenous Laboratory.—Loeser's Intravenous Solution of Mercury Oxycyanide. Seydel Mfg. Co.—Benzyl Succinate-Seydel. Nonproprietary Articles.—Benzyl Succinate. Calcium Caseinate.

Loeser's Intravenous Solution of Mercury Oxycyanide.—Each ampule contains 5 Cc. of solution, representing 0.008 Gm. mercuric oxycyanide N. N. R. New York Intravenous Laboratory, New York.

Ampules Ven Sterile Solution Mercury Oxycyanide, 0.008 Gm.—Each ampule contains 5 Cc. solution, representing 0.008 Gm. mercuric oxycyanide, N. N. R. Intra Products Co., Denver, Colo.

The Physical and Psychical Reaction of the Child to Its Environment*

By HUBERT C. KING, M.D., Lakewood

Editor's Note.—Psychoanalysis shows that a large number of neurasthenics are the victims of an unnecessarily severe or over-indulgent environment during childhood. Kill that life energy, which strives for expression and is the working out of the destiny of the individual, in the child and you have a diseased mentality, an individual out of harmony with his environment and a soul groping blindly in the darkness for something it knows not what. A great deal of this abuse of the child, in Dr. King's experience, is due to lack of understanding. It is almost pathetic to see parents making allowances for the physical frailties of their children, helping them over the rough places and then expecting of them the minds of adults. The child mind does not work as the adult's mind and the instincts of childhood are not the instincts of mature life. The problem of raising children to be fine men and women requires the co-operative efforts of parents and physicians in making the environment of childhood serve its proper purposes.

THE physical environment of the child has received considerable attention during the past decade. Various agencies have contributed their part to furnish him with suitable clothing, pure milk and fresh air. How much good has been done by the physician, the public-health nurse, the press and the mothers' club in the saving of life and the improvement of the race cannot be estimated.

THE FORMATIVE PERIOD OF PSYCHIC AND MORAL CHARACTER

The child, however, lives in, absorbs and reacts to another environment fully as important—the psychic, the moral. More attention is being paid to this side of child life, but I feel that the medical profession is trailing the procession. The programs of the mothers' clubs show that they are discussing the problems of child-training and of obedience and punishment, while the physician remains too materialistic, thinking only in terms of grams and calories. We are far behind the physicians of a former generation who took account of the whole man and we alone of his body. This is a natural consequence and we shall never return to the intimate understanding which existed between the country doctor and his patient. Still, we can strive to learn a little of the psychic side of our patients, with at least a part of the energy we expend in the percussion of the chest and the radiography of the stomach. We should do our patients more good and really solve more of their problems.

It is exposing one's entire hand in the beginning of the game and yet necessary to the purpose in mind, to say that in the earliest childhood and even in infancy the psychic future of the adult is formed. The physician who treats only children cannot completely appreciate the significance of the statements to follow. To thoroughly feel the importance of the psychic environment, he must see the end results as expressed in the nervous, psychic and moral bankrupt of adult life.

In early infancy and throughout childhood the individual is forming his psychic and moral character. Certain influences in later life may be powerful enough to change early formal characteristics, but these are the most fundamental. There is every reason why this should be so. Forbush, who has a deep insight into the mind of the child, says that whatever the child sees "he tends to express in imitation acts." There is the non-purposive imitation, "the impulse of the child to do without thinking whatever he sees." Purposive imitation begins at about the third year, with direct imitation of adults. This later involves imitation of their ideas rather than their literal acts. "The child cannot live life, so he plays it." So one can see that from the earliest age the child has every reason to be like his associates.

NEURASTHENIC RESULTS OF ENVIRONMENT

Inheritance has but little to do with the development of adult characteristics. There is no desire to reopen the time-worn debate on the relative importance of heredity and environment in the formation of adult mind and body. In seeing adult patients who might be classified as having a mental attitude characteristic of the neurasthenic and asking particularly regarding the environment in which they were reared as children, one rarely fails to obtain a clear history of a parent who had the same mental characters. The present difficulty, be it functional or organic, may be causing definite symptoms, but it is not the cause of the cast of mind. If it were not the present trouble, it would be something else.

The attempt is being made to state what appear to be clearly defined facts. First, there is a modern tendency to attribute disorders of the nervous system (usually classified as neurasthenia) to various organic conditions found by physical examination. This attitude is praiseworthy and will help in preventing us from overlooking a serious organic lesion. The present day physician hesitates to make a diagnosis of neurasthenia until every other possibility has been excluded. There is, however, a definite mental or moral weakness

*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

which exists, even without organic disease. If an organic deviation from the normal is found in the subject of such a disorder, its correction does not remove the inherent tendency. *Second*, the mental state originates in influences acting during infancy and childhood. *Third*, the influence referred to is one of environment.

ILLUSTRATIVE CASES

I had sometime past the opportunity to observe two girl babies and their parents. The children were normal at birth and their parents could not be called neurasthenic. I saw both children, one at the age of three weeks and the other at the age of eight months, adopted into childless families, presided over by neurasthenic women. The atmosphere of the homes was one of nerve tension and, indeed, in each case, the child reflected not the image of its own, but of its foster-mother. The resemblance today is striking. Both children are as neurotic as their adopted mothers. Forbush says, "Nurture is more important than nature."

It is surely not a new idea to regard the adult neurasthenic as a result of his childhood environment. Years ago Paul Dubois of Berne used the term *neurasthenia*, a term common enough with us now and originated here in America by the neurologist, Beard, and some years later (1877) adopted by the great Moebius and fixed in our nomenclature by the weight of his authority. Dubois, defined *neurasthenia* as "chronic accumulated fatigue." Moreover, he pointed out that the neurasthenic acquires his psychic characteristics from infantile and childhood environment. If good health and good fortune continue through adult life there is less chance of a break. To quote his words, "If the general health is good, these faults remain more or less concealed, like rocks at the bottom of the sea, covered at high tide. Let some debilitating influence arise—physical, intellectual and, above all, emotional fatigue—and these defects are laid bare, like the rocks at low tide."

PROBLEMS AND POINTERS IN CHILDTTRAINING

It is not alone in direct imitation of a neurotic parent that the psychic future of the child is jeopardized. Through improper training and failure of understanding the mind and actions of the child, the parent fails in his duty. It is not the proper time or place to enter into a discussion of childtraining. Only some general points bearing on our problem will be mentioned. *Neurasthenics who have been treated by psychoanalysis show that a large proportion of them become neurasthenics because of adverse environment in childhood, consisting of a parent or both parents who did not understand the effects of their severity or overindulgence upon the child. Constant commands and unreasonable "don'ts" kill in the child the most vital part of his organism. It is that life energy which strives for expression. It is the working out of the destiny of the individual. Kill this in the child and you*

have a diseased mentality, an individual out of harmony with his environment, a soul groping blindly in the darkness for something it knows not what. A great deal of this abuse of the child is due to lack of understanding. It is almost pathetic to see a parent making allowances for the physical frailties of his child, helping him over the rough places and then expecting of him the mind of an adult. The child mind does not work as the adult mind and the instincts of childhood are not the instincts of mature life.

Education is not without its share of blame in the production of the neuropath. The modern system begins too early and pushes too fast. We will admit that there are many changes in the schools which will be of great benefit. But the fact remains that, as yet, the educator has taken into account only how much he can teach the child. In his little book "The Training of the Human Plant," Luther Burbank points out the dangers of the present school system and its effect upon the mind and body of the child. There are two distinct ways in which the child is injured. The mental stimulus is applied too early and it is too intense. Moreover, aided by the system of departmental instruction in vogue in all the large towns, the child is assigned home work by several teachers, each ignorant of how many other lessons have been given. The result is too much work. I am informed a change is being made in some places by allowing each teacher a certain night on which to assign her lesson. A radical change is needed because, with the long hours in school and the work at home, the child is left little time for out-of-door play. To this burden the parents, spurred on by pride in their child, often add extras outside the school curriculum. I have recently seen a girl, nearing high-school age, trying to do her school work and take lessons and practice in music, elocution and fancy dancing.

HYPERTENSION AND LOSS OF THE PLAY INSTINCT

So far we have spoken only of the effect of environment upon the mental and psychic side of the child. It is not trying to carry the idea too far, nor attempting to attribute real organic defects to a psychic cause, to point out some relations between conditions considered truly organic deviations from the normal and the mental reactions of the individual. Moschocowitz, writing in the *American Journal of Medical Sciences* for November, 1919, and April, 1920, cites his impressions of the type of individual who is the subject of an excessive blood-pressure. He classifies the cases of hypertension and we understand the type we are to refer to is that called by Clifford Allbutt, "Hyperpiesia." The individual described is a type familiar to us all and aptly styled by the writer as the "antithesis of the child." To quote from his paper, "Psychically, these people are tense; pursue their vocation with tremendous seriousness and worry over

trivialities. In consequence they are irritable. Phlegm and hypertension are, in my experience, antagonistic. Furthermore, these individuals have narrow intellectual horizons. Their interest in anything outside of their business is desultory. They have no hobbies. Who cannot recognize in this picture the individual that has been facetiously termed the T. B. M. or 'tired business man,' whose tastes have activated a large portion of the so-called modern drama? * * * His most conspicuous mental incapacity is his inability to play. He is no longer a child. I take it that most of us have something of the child within us. Age is not always a matter of years. The greatest tragedy is when the spirit of the child goes early, as so often happens when it is blighted by the premature struggle for existence or the gloom of a depressing environment. Others keep it to a ripe, green age; others, like Peter Pan, never grow up. To be a child is to be able to make believe, to have fancy and imagination, to be able to take things as they are, and not as they think they should be, to live in the present and not in the past, to play lightly with the future, to bear with equanimity the stresses and strains of modern existence, to have ideals, to find some interest in everything, and above all, to have a sense of humor." I have quoted somewhat at length, but, I believe, no apology is due for the author has written some facts and has written them well. Where, if not in childhood, is laid the foundations for such a mental horizon?

NERVE FATIGUE AND INFECTION

Again running the risk of being accused of attributing disease to the mind, I wish to bring forward the problem of repeated upper-respiratory infection. Two years ago, before this Section, I tried to discuss this question and pointed out that, in my opinion, the problem was a complex one and that surely the removal of tonsils and adenoids was not a panacea. In the two years past I have had no reason to change my mind. The question has not been answered. There is something vital behind it all and there is an inherent difference in the children that I see. This difference is not one of natural advantages nor of opportunities, but of training and environment. I have attempted for myself a solution of why these children acquired every infection which was available and I am sure, if you will agree that the better care the child seems to receive, the poorer are the results, the more readily is infection acquired. No one wishes to revert to the days when child welfare was not considered, when milk was not inspected, nor the parents instructed in proper clothing or food, but still in all our care we have lost sight of something which is fundamental. A certain amount of wholesome neglect is essential. By too much attention and too much coddling, by too many "don'ts" we attract too much of the child's attention to himself, we make him a weakling and a neurasthenic. Abt, who is a keen observer,

states, "If these be facts, I cannot but be convinced that the terrific expenditure of nerve energy must lessen strength and lower resistance to infection. There is no fatigue so fundamental, so far-reaching nor so accumulative as that of the higher nerve centers."

Crile has shown the effect of powerful external stimuli upon the Purkinje cells and the cells of the adrenal cortex and has proved that accumulative fatigue, in the form of prolonged insomnia, or repeated emotions, injures these cells and the injury is never entirely recovered from. A lowering of resistance is the cause of repeated infection and, if these facts are but part of the story, they are not to be overlooked.

CONCLUSIONS

The life of this generation is strenuous. It demands all the powers of mind and body to keep up the pace. Our existence is particularly fitted to develop a race of neurasthenics. As physicians, we must not be of service in the development of the neurotic type. Our problem is not an easy one. It requires judgment and a broad and deep knowledge of the entire man. It demands that we educate the mother to call the physician early in the course of disease and still not make of her a neurasthenic, by helping her to worry over every trivial deviation from the supposed normal. We must aid in improving the race by those physical agencies which we have found of so much value, but we must not make of our children hot-house plants. The problem requires a sane mental attitude and a proper evaluation of the fundamentals.

We believe that certain nervous conditions in adult life are the results of definite organic disease processes. Just as firmly, are we convinced that there is a neurasthenic type, which reacts to unfavorable external stimuli which are too slight to affect the normal individual. The seeds of a neurasthenia are sown in infancy and childhood in an unwholesome mental and psychic environment. Perhaps the expenditure of energy in the daily life of such an individual is to be reckoned with when we try to solve some of the problems of diseases which present themselves to us as organic entities. In order to prevent the development of a neurasthenic race we must supply our children with the proper psychic environment. — We, as physicians, must be interested and we must return to the viewpoint of the physician of a former generation, who was not so engrossed in the physical that he failed to take account of the man.

Forbush: "Guide Book to Childhood." Jacobs. Philadelphia.

Dubois: "Nervous States." Translation. Funk & Wagnalls Co.

Burbank: "The Training of the Human Plant." Century Co., New York.

Moschowitz: "Hypertension: Its Significance, Relation to Arteriosclerosis and Nephritis and Etiology." Amer. Journ. Med. Sci., Vol. clviii, p. 668.

Moschowitz: "The Treatment of Hypertension." Amer. Journ. Med. Sci., Vol. clxix, p. 517.

Abt: "Hysteria in Children." Med. Clinics of Chicago, Vol. I, p. 1,477.

MEDICAL BUILDING.

Skin Changes Accompanying Certain Constitutional Diseases*

By J. L. MURRAY, M.D., Toledo

Editor's Note.—In the opinion of Dr. Murray individual susceptibility plays a leading role in determining the skin changes accompanying certain acute and chronic constitutional diseases. The skin changes noted may be those of color such as accompany chloasma, Addison's disease, toxic goiter, vitiligo, cancer cachexia, acute nephritis, or jaundice. The eruptions of certain infectious diseases are found in typhoid fever, severe influenza, malaria, cerebro-spinal meningitis, tonsillitis, acute rheumatism, pneumonia, septicaemia and following the injections of serums. Skin changes are also seen during the course of such chronic diseases as diabetes, asthma, arterio-sclerosis, nervous disorder and the so-called gouty state. Certain cutaneous changes are also noted in nervous diseases, digestive disturbances and periodic physiological states.

THE skin, being one of the important organs of the body, must of necessity, as other organs do, share the effects of certain constitutional diseases. Now, while we do not want to leave the impression that "bad blood" is the causal factor, as the old observers taught of all dermatoses, there is no doubt that internal disorders are the direct cause of certain skin diseases, and an aggravation to other dermatoses already existing. This subject tends to lead one into the question of the etiology of skin diseases in general, but in a short paper like this, it will be impossible to even do justice to the more striking example of relation of skin lesions to internal disorders.

Aside from the complex physiological and anatomical structure of the skin, the question of individual susceptibility determines whether or not the skin presents lesions as its expression of the internal disturbances. An effort will be made here then simply to classify the lesions which occur fairly constantly in certain constitutional acute and chronic diseases, in which the skin eruption is incidental or symptomatic, and in some cases of great diagnostic assistance.

INDIVIDUAL SUSCEPTIBILITY

As already mentioned the difference in susceptibility of the individual skin is shown constantly in the varying reactions to external irritation. The skin of some children is almost immune to ring worm and favus, and apart from the subject of cleanliness, some skins are much more resistant to even scabies and pediculi than others. This same holds good in considering the internal, causal factors of skin eruptions, and the question of individual susceptibility is bound to have a bearing on the character and extent of the lesion on the skin, even though the etiology may be the same in kind and degree. So in one of the so-called exudative diathesis, there sometimes occurs eczematous eruptions in the course of infections or other constitutional diseases; also in the physiological states of pregnancy, lactation, and dentition. So it is written and be-

lieved by some that even eczema is not a disease entity, but merely a cutaneous reaction, a symptom or response on the part of the skin to external or internal irritation.

The exanthemata or syphilides are not considered in this paper for the reason that the skin lesions are so frankly the leading symptom, in the former at least, and so constant, that they are classed in all works on dermatology as skin diseases.

Drug eruptions are usually described, although too briefly, in the average work on dermatology, but there will be no effort made here at a classification, although it may be necessary to call attention in some instances to the drugs used as being causal of the skin eruptions rather than the disease for which they are administered.

CLASSIFICATION OF SKIN CHANGES

The skin changes and lesions occurring in constitutional diseases may be classified as follows:

Changes in color,—erythemas, macular, urticarial, papular, vesicular, pustular, and purpuric eruptions.

The color of the skin in the white race is dependent largely on the degree of vascularity of the corium, supplemented by a deposit of pigment in the lower or mucous layer of the epidermis. This pigment varies and is increased on exposure to sunlight, but on the covered portions of the body the pinkish hue of the skin is given by the blood vessels and their contained blood, so that any diseases producing changes in the vasomotor apparatus, in the blood itself, or acting on the pigment bearing cells, will alter the color of the skin.

Chloasma, or so-called liver spots, are yellowish or brownish discolorations of the skin occurring in patches, usually on the face. They are due to an increased pigmentation of the skin, and are usually symptomatic of some abdominal growth. It also occurs in pregnancy, and certain pathological conditions of the uterus and ovaries, the distribution in the latter conditions being around the forehead and cheeks.

The fairly constant presence of chloasma in certain abdominal diseases and growths, such as abdominal tuberculosis, cancer, enlarged liver,

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and malaria, suggests implication of the sympathetic ganglia and nerves so richly supplied to the abdominal cavity. In hypertrophic cirrhosis of the liver and diseases of the pancreas there often occurs chloasma, and sometimes a general bronzing of the skin. Diseases producing edema in lax tissues, such as under the eyes, often induce pigmentation at this site.

Addison's disease is probably the best example of a constitutional disease in which the hyperpigmentation is always present. This brownish pigmentation may be pretty general, including the mucous membranes of mouth, conjunctiva and vagina. It is usually confined, however, to the exposed parts and to parts exposed to pressure, such as the waist line, knees, axillae, groin, and under the breasts.

Graves' disease often presents this increased pigmentation in a lesser degree in about the same situations, although sometimes the skin may be uniformly bronzed.

This bronzing has also been seen in Hodgkin's disease.

The opposite condition to chloasma, *vitiligo*, or acquired leukoderma, is usually symptomatic of some toxæmia, nerve exhaustion, and is often seen interspersed with hyper-pigmented areas in Graves' disease.

In *cancer cachexia*, particularly cancer of the stomach, the skin has an earthy palor, which is accentuated by a washing of the subcutaneous tissues. This earthy paleness or grayness is nearly always noticed in connection with cancer anywhere in the body.

In *acute nephritis* the skin is a pasty white, while in chronic Bright's disease, the skin may be florid in the early stages, and in the later stages a fawn color.

Cyanosis in its extreme form occurs in only two classes of ambulatory patients, *emphysema* and *congenital heart disease*. Milder grades of it can be observed in a good light in many other conditions in which there is obstructed venous return or deficient oxidation.

Jaundice varies in degree, but is usually differentiated from any other uniform pigmentation. It is sometimes toxic, but is usually due to obstruction to the flow of bile from liver to intestines with consequent absorption.

Icterus neonatorum is usually benign, but is occasionally due to sepsis, introduced at the umbilicus, or to syphilis of the liver.

THE ERUPTIONS OF CERTAIN INFECTIONS

At this time an effort will be made to enumerate some of the eruptions which occur with more or less constancy in certain infectious disorders.

In *typhoid fever* the rose macule is always looked for as a typical symptom about the end of the first week. This eruption, while usually confined to the trunk, may extend over the whole body. Aside from the rose spot, which is almost pathognomonic of typhoid, there occurs occasion-

ally erythemas and morbilliform rashes, which may desquamate. There is some suspicion of these being due to medication, but their occurrence with different forms of treatment strongly suggest their association with the typhoid state. Vesicles, as represented by herpes facialis or labialis, rarely, if ever, occur in typhoid. Some writers refer to herpes as negatively pathognomonic of typhoid fever. Furuncles occasionally occur around the buttocks. Miliaria, or prickly heat papules, and vesicles are quite common, and sometimes in sufficient number to suggest scarlet fever.

In *severe influenza* there occurs functional vasomotor changes, such as redness of the skin. Sometimes an erythema of scarlatinaform character.

Herpes facialis occurs quite frequently in some epidemics, and herpes zoster sometimes is a sequel. Prickly heat papules occur in this as well as other diseases where there is considerable sweating.

In *malaria* herpes is quite common, a point to be remembered in differential diagnosis from typhoid. Urticarial eruptions are quite frequent in malaria, purpuras occasionally, and erythemas rarely.

A petechial purpuric eruption appearing about the third day of the disease is highly characteristic of *cerebro-spinal meningitis*. This eruption gave it the name of spotted fever, although the condition is not constant, and in some epidemics does not occur at all. Herpetic vesicles around the nose and mouth, face and neck, and sometimes extending to the trunk, and even on the extremities, are the most common eruptions in this disease, more common than in other infection, with the possible exception of pneumonia.

A slight erythematous eruption is sometimes seen in cases of *simple acute angina and tonsillitis*, which may suggest measles, or scarlet fever of the milder type.

In *acute rheumatism* multiform erythemas and erythemas nodosum occur on the limbs, arms and face. Purpura rheumatica, or peliosis rheumatica, seems a part of the rheumatic process in some cases. Purpuric patches and maculopapules which are haemorrhagic occur on the legs and arms, and sometimes on the trunk. The two classes of lesions, the erythemas and purpuras, may be seen in the same case of rheumatism, or septic arthritis. From the sweating miliaria and sudamina papules are common in rheumatic fever.

In *pneumonia* herpes facialis and labialis are very constant, and this, together with a slight erythema of cheeks, particularly on the affected side in lobar pneumonia, are about the only skin eruptions, with the exception of the sweating lesions, seen with any degree of frequency in pneumonia.

In *septicaemia* the erythematous and macular rashes are the type commonly occurring, and

these scarlatinaform or morbilliform, rashes are the usual thing in these septic processes.

The administration of *anti-diphtheritic, anti-tetanic, or anti-streptococcus serum* is often followed by an eruption, which is usually urticarial in character, either an urticarial erythema or wheel, or both, accompanied rarely by vesicles and large blebs. These rashes may appear in a few hours, or may not show two or three weeks following the treatment, and are examples of the reaction to the foreign protein. There is usually quite a constitutional disturbance with these serum rashes, elevation of temperature, headache, joint pains, etc., lasting from twenty-four to forty-eight hours.

These various skin eruptions occurring during a course of acute illness are usually incidental, and represent merely one symptom of the disease. They are seen more by the general practitioner than by the specialist, and are mentioned simply to give them proper prominence as symptoms, and in some cases call attention to their importance in differential diagnosis.

SKIN CHANGES ASSOCIATED WITH CHRONIC DISEASES

The skin changes occurring during the course of chronic diseases, such as diabetes, asthma, arteo-sclerosis, nervous disorders, and the so-called gouty state, together with the diseases producing changes in color, as already mentioned, are more important to a dermatologist, because he is often consulted about them.

In *diabetics* we often observe a dry and scaly condition of the skin with more or less general pruritis. Through contact with saccharine urine, particularly in women, erythematous, scaly, and sometimes papular and vesicular eczema occurs around genitals. The clearing-up of this eczema by a local treatment may materially diminish the glycosuria. Diabetic gangrene of toes and feet, beginning as large vesicles or bullae, and later forming black crusts and ulcerations, are not uncommon in diabetics. More vesicles, starting at the periphery of these patches, sometimes produce serpiginous areas simulating syphilis. There is always secondary infection in these lesions, the diabetic tissues offering poor resistance to the growth of bacteria.

Xanthoma are large flat, yellowish papules occurring in diabetics, and they usually itch, as they occur in this disease.

Anesthesias, shedding of the nails, bronzing of the skin, cyanosis of toes and fingers, and suppurative lesions, such as furuncles and carbuncles, also occur in diabetes.

Asthma and urticaria seem to bear a close relation, and by some it is thought that the pathology is similar in the two diseases. Asthma, like urticaria, being an edematous swelling of the mucous membrane similar to the wheel in the skin. Attacks of urticaria and asthma have been observed to alternate in the same patient in a manner which suggests a close relationship.

Circulatory disorders, such as high blood pressure and varicose veins, are accompanied by certain dermatoses, the former predisposing to urticaria and rosacea, varicose veins producing eczemas and ulcers in lower extremities.

The engorged hemorrhoidal veins induce eczema of the anal and genital regions.

In that condition of faulty metabolism, formerly referred to as the *lithaemic or gouty state*, and in cases of *acute gout*, there occurs quite a variety of skin eruptions. In fact, this question of faulty metabolism is known as a big etiologic factor in skin diseases. Erythematous, vesicular, and papular eczemas often alternate in the gouty individual with frank attacks of joint inflammation. Acne, and particularly acne rosea are often induced and aggravated by this acidemia.

THE NERVOUS SYSTEM AS A CAUSAL FACTOR IN SKIN DISEASES

The nerve supply to the skin is so plentiful, there being aside from the nerves of ordinary sensation, nerves of peculiar sensory power, and also the vasomotor nerves, that it is easy to see what an influence nervous disorders would have in the production of skin lesions.

The subject of *anesthesias and paresthesias*, and the pruritis of senility, will not be gone into here. The subject is such an enormous one, there is such a variety of neuritic dermatoses, classed as angio-neuroses and tropho-neuroses, it would take too much time to enumerate them in connection with functional and structural nervous diseases.

In passing, however, would like to call attention to a few phenomena, demonstrating the intimate connection of the nervous system as a causal factor in skin diseases. The lighting up of the eczema of hands and face, or the anus, after mental strain or overwork; urticaria following nervous and mental shock, or an increase in acne eruptions, or even psoriasis following the same. Reflex phenomena are common, and the most frequent example is the exacerbation of the eczema in a teething infant, in which each accision of a tooth has an influence on the skin.

Herpes zoster is the clearest type of the dermato-neuroses, the condition being an acute descending neuritis with the production of herpetic patches solely through nerve influence.

In *tabes* in the ataxic stage vasomotor and tropic skin changes are noted. The skin is sometimes thickened and scaly on the limbs, and there may occur herpetic or purpuric eruptions on these parts, as well as perforating ulcer of foot, and ulcers on other parts, where pressure is exercised, such as bed sores. The same lesions are seen in paretics, but in addition erysipelas is particularly common in this condition. The tissues of these patients are non-resistant, the slightest contusion being followed by necrosis.

In *syringo-myelia*, and in many other nervous diseases there occur skin changes.

DIGESTIVE DISTURBANCES AND SKIN CHANGES

We are all familiar with the effects of digestive disturbances in the production of urticaria, and the aggravation of acne, eczemas, and other skin diseases. In these digestive conditions it is not always possible to get a clean-cut history of an acute digestive disturbance, but careful investigation will often reveal atonic and fermentative conditions in the stomach, functional derangements in the liver with intestinal indigestion and constipation, or maybe a chronic appendicitis, which is keeping alive, or may be the origin of a skin trouble.

Aside from canned goods, lobster, fish, nuts, cheese and strawberries, which in themselves, seem to have the power to stir up a skin disease, our diet lists for patients with acne and eczema are merely for the purpose of correcting irregularities in digestion rather than for any specific detrimental quality the article itself exerts on the skin. It is a "must not" rather than a "may eat" dietary.

In *infantile eczema* this is especially true. The diet being less complex, the indigestion with consequent eczema or exacerbation of an eczema can in some cases be traced to too much fat, proteid, or carbo-hydrate, the fat being the chief offender.

SKIN CHANGES IN PREGNANCY AND MENSTRUATION

The physiologic state of menstruation and pregnancy are often accompanied by a dermatoses. Acne and eczema are always aggravated at the menstrual epoch, and sometimes exist at this time only. Herpes, or a dermatitis herpetiformis, or urticaria, occur early in each pregnancy of some women. On the contrary, some dermatoses are improved or disappear during pregnancy.

These phases are merely touched upon, in closing to show the need of more study on this subject on the relationship of cutaneous diseases to constitutional disturbances. While it is a fact that there are not many specific instances of a perfectly definite relationship demonstrated as yet, the matter is being investigated a great deal of late, and we hope there will be more light soon.

It is impossible in so short a paper to do more than hint about a few of the things which take place in this connection, and to so present the subject as to start discussion.

The skin changes observed by the neurologist in his special work, the urologist, obstetrician, proctologist, surgeon, pediatricist and general practitioner all offer material for interesting discussion in this relation and the aim of this paper was to suggest and stimulate, this discussion.

Future of Medicine As Affected by Ultra-Specialization*

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Editor's Note.—Apparently the present medical situation does not differ very materially from that in Egypt about 450 B. C., when Herodotus wrote—"The art of medicine among us is distributed thus: Each physician is a physician of one disease and of no more. The whole country is full of physicians." In the opinion of Dr. Ochsner and others our medical colleges have all but ceased to train general practitioners and instead are turning out only specialists and research workers. As fully 90 per cent of all human ailments are best dealt with by the properly trained general practitioner, it is no wonder, in view of the present educational system in medicine, that the rural districts are without adequate medical service. Even in the cities ultra-specialization is becoming a menace not only to public welfare but also to the economic stability of the profession. Indications point to a revision of medical education along much more practical and economic lines, in order to again produce the rank and file of general practitioners, who will hold the esteem and respect of their patients, which is due the tried, true and trusted family physician.

AN OLD Swiss proverb translated says, "everything has its advantages and its disadvantages." The same idea is the basis of the great classical *Essay on Compensation* by Emerson. While I am going to set forth in my observations the advantages of generalization and the disadvantages of ultra-specialization, I am not unmindful of the fact that generalization has also some disadvantages and specialization many things to commend it; and even ultra-specialization sometimes has its value. In this age and day no thinking man would want to get along without specialists and yet generalization must be the foundation and specialization the ornamentation of our house of knowledge. Today it would almost seem that to some persons at least specialization is the only thing worth while.

Few of us seem to realize how much we owe to the men with general information and general activities and how relatively little to the ultra-specialists. In order to stem the present craze for ultra-specialization and to help the general practitioner to come into his own I have decided to draw a few illustrations from medical history.

ILLUSTRATIONS FROM MEDICAL HISTORY

Benjamin Franklin, the tenth child of a printer, with only about two years of schooling, became during his lifetime one of the most learned men of his age and day and probably has to his credit more useful inventions, innovations and practical observations than any other American. Thus, for instance, though not a medical man and never having studied medicine, he nevertheless, in 1758, wrote what was one of the best, if not the best essay, on the origin and nature of a cold,

*An address presented before the Evanston Branch of the Chicago Medical Society, 1921.

that had appeared in print up to within twenty or thirty years ago, and in 1780 wrote a most forceful dissertation on the cause and prevention of gout.

The law pertaining to the conservation of energy and mechanical equivalent of heat was not discovered as one would naturally suppose by a physicist, but by a physician, Julius Robert Meyer, who in his article on "Conservation of Energy and the Mechanical Equivalent of Heat from Physiological Computations," demonstrated the inter-relation between heat and energy. It is interesting to note in this connection that this great essay, when sent to the editor of a prominent scientific journal, promptly wandered into the waste basket, and Meyer had to go through long and arduous labor and re-experimentation and recomputation before he could complete the article again and finally succeeded in having it published. It would be interesting to know just how many of the most important discoverers have had similar experiences and had to overcome great obstacles before they finally came into their own.

The first great work in agricultural chemistry was written, not by a professor of agriculture or one who knew anything about agriculture, but by the great physiological chemist, Von Liebig.

The great foundation works of botany were not laid by a naturalist but by an itinerant physician, Karl Linne.

The laws of heredity were not discovered by a specially trained investigator, but by the monk Mendell, who in the solitude of his cloister carefully observed and painstakingly recorded the facts that laid the basis for this great science.

Ephraim McDowell, an unknown country practitioner residing in the small frontier village of Danville, Kentucky, in 1809, practically without any assistance performed the first operation for ovarian tumor, on a lady who was then 47 years of age, who recovered from the operation, lived in good health to the time of her death at 78 and outlived her benefactor by eleven years.

Edward Jenner, through whose discovery of vaccination probably more lives were saved than by any other discovery, was one of the most versatile of men. Besides being educated as a physician and being engaged in the general practice of medicine for many years, he was a naturalist of great repute, having arranged and prepared the zoological specimens which Sir Joseph Banks had brought back from Captain Cook's first voyage in 1771. This he had done so well, that he was offered the post of naturalist in the second expedition. In addition, he wrote a number of monographs on biological and geological subjects which were presented before the Royal Society. He was a fair singer and musician and a writer of verse.

To his great fund of knowledge and large general experience can unquestionably be attributed in large measure the acuteness of his powers of

observation which made it possible for him to make a discovery which has proved of such inestimable value to mankind. The ravages of small-pox before Jenner's discovery, we can today scarcely comprehend for we are creditably informed that before the general employments of vaccination, one-tenth of all deaths were due to this malady, to say nothing of the loss of sight and hearing and disfigurement of its victims.

Bacteriology, the very foundation of modern medicine, was given its first impetus, not by the work of a physician, but by the work of the botanist, Pasteur. It was the work of Pasteur that made modern surgery possible.

Then again while the pathologists and climatologists of their day were squabbling about the cause of epidemics and trying to explain them on some obscure unintelligible conditions of the air and sub-soil, the great Koch, an unknown country practitioner in an obscure village of Prussia, discovered the bacillus of tuberculosis and the spirillum of cholera and laid the foundations for modern bacteriology. It is interesting in this connection to recall the fact that most of the pathologists of his day ridiculed Koch when he first made public his discoveries—one of the most prominent ones, Pettnikoffer, going to the extreme of offering to drink a test tube full of Koch's cholera spirillum culture, saying that he had for many years observed the same spirillum in the water of every mud puddle examined. He actually drank the contents of one of Koch's test tubes which nearly killed him and incidentally convinced both himself and the rest of the ultra-scientific pathologists that Koch was right.

The first man to publicly demonstrate the value of ether in a surgical operation was William T. G. Morton, not primarily a medical man, but a dentist. Lawrence H. Prinz, the man who worked out the modern open or drop method of giving ether in place of the old closed-cone, choking method was not an anesthetist by profession, but a general practitioner, now superintendent and managing officer of the State School for Orphans at Sparta, Wisconsin.

Lewis Albert Sayre, who raised orthopedic surgery to the dignity of a specialty, was a general surgeon, and may well be called the Father of Orthopedic Surgery in America and in fact also the Father of Orthopedic Surgery in continental Europe. Before his time the treatment of deformities was very largely in the hands of bracemakers and quacks, and it was through Sayre's influence that not only American orthopedics, but the orthopedics of continental Europe were brought into their own. Hoffa, one of the first and greatest orthopedic surgeons of continental Europe, himself primarily trained as a general surgeon, came to New York and learned Sayre's methods and disseminated the knowledge thus acquired in his own country. Hoffa and Lorenz, the latter also trained as a general surgeon, first developed the open and later the blood-

less treatment of congenital dislocations of the hip.

In this connection it is very interesting to observe that after Lorenz published his bloodless functional weight bearing method of treating congenital dislocations of the hip, the Boston Medical Society appointed a committee of three orthopedists to investigate his claims and after a year of study and theoretical consideration they came out with a report which in substance said that the bloodless reduction of congenital dislocation of the hip was impossible, and when I read my first paper on congenital dislocation of the hip in Chicago, in which I showed the pelvis of a patient, who died several years after complete functional and almost perfect anatomical recovery, the three professors of orthopedic surgery, who discussed my paper, stated that to maintain the limbs at 90 degrees ventral flexion and 90 degrees abduction was an impossibility. I then showed a picture of the patient in this position to refute their assertions to their great confusion and consternation.

The cause and rational cure of bunions, one of the most painful and displeasing minor afflictions, were not discovered by some great orthopedic surgeon, but by the practically unknown small-town general practitioner, Herbert E. Robinson of Kenosha, Wis.

The rational ambulatory splint, the pneumatic splint, was invented by the late Dr. Hughes, a family physician of Sheboygan, Wisconsin, and perfected and introduced by the layman, Mr. Seaman.

FADS AND FOLLIES OF MEDICAL PRACTICE

Many additional illustrations could be cited; however, from the above we have a right to conclude that the men with general information and with a broad outlook upon life have discovered most of the worth while things that have so far been discovered and that the ultra-specialists have not made their fair share of the contributions along these lines. But this is not all. In addition, the latter have by their opposition, as above cited, sometimes delayed progress, have been responsible for most of the fads and follies in medicine and have sometimes discredited useful procedures by pushing them to the extreme and making them ridiculous. In reference to the last two accusations we need but recall the universal tampon of thirty years ago. Few women escaped from a gynecological clinic or even from the office of a gynecologist in those days without a tampon of some kind. Later came the equally almost universal curettage; then the removal of ovaries with imaginary cysts. And later the thoroughly pernicious permanent ventral suspension of the uterus and also the commonly performed nephropexy, then the routine catheterization of the ureters. About twenty-five years ago a prominent professor of obstetrics in Chicago advocated the routine curettage of every

parturient woman directly after delivery and more recently an equally prominent professor of obstetrics made the statement at a medical meeting that every labor should be considered pathological.

We must not forget the gyromele of some twenty-five years ago nor the Bier vacuum pump craze, and the Dakin-Carel solution fad. In more recent years we have seen the fad of bone-plating all simple fractures, the removal of the large intestine for constipation, the routine suturing of the pillars after tonsillectomy, the curettage of teeth sockets and even the chiselling away of the alveolar processes after extraction.

Some of the above procedures have real merit and should occasionally be employed even to this day, but most of them were so overdone by over-zealous specialists, that they are thoroughly discredited. It is such fadism that only too often discredits medicine in the minds of the thinking public.

NEEDLES IN HAYSTACKS

While the microscope and the test tube have their proper places and important function, let those, who worship at the shrine of these, remember that they would have considerable difficulty in finding either a mouse or an elephant with a microscope and that after all all test tube conclusions are based on tests of dead material and must be taken with a grain of salt. And let them remember too, that after all the five well trained, unaided senses are usually indispensable in reaching a correct diagnosis. If you want to find a needle in a haystack, be sure to employ an ultra-specialist, with his fine instrument, but be equally sure to indicate to him the particular haystack in which the needle is concealed. And even then sometimes he will not find the needle as the following case will illustrate. Only recently I had a patient come to me with a large hydronephrotic kidney, containing at least a quart of fluid and twenty good sized kidney stones, who had been examined a short time previously by one of our most prominent neurologists, who overlooked the mass in the abdomen which was later discovered by a general practitioner and sent by him to an X-ray specialist who failed to find the kidney stones. Later referred by this same general practitioner to me when I was able by a simple examination with my fingers to outline the tumor, and to find the stones which the roentgenologist had overlooked after I had removed the kidney and opened the sac.

I have related the above history in order to emphasize the limitations of the ultra-specialist and his diagnostic measures. Let us ever remember that the percentage of error, in conclusions based upon a careful examination of a patient by the unaided senses, is much smaller than the percentage of error in conclusions based upon almost any one of the more modern ultra-scientific diagnostic methods and that the best

results can only be obtained if the ultra-scientific methods are only employed as aids to the simpler methods; hence, let us insist that the ultra-specialist and the laboratory worker, and particularly the research worker, must always be subservient to the clinician with wide clinical experience, not only that they may be of the greatest possible service to the science and art of medicine and thus to humanity, but in order to prevent them from doing incalculable mischief.

DIRE RESULTS OF ULTRA-SPECIALIZATION

Another reason for bringing up this subject at this time is that we are now almost in a frenzy of ultra-specialization and it is about time for some one to point out the dangers and to call a halt. Our medical colleges have all but ceased to train general practitioners and instead are practically training only specialists and research workers. Many of the professors in our medical schools have contempt for the general practitioner with the result that a number of evils are rapidly developing.

First, the public in general, and particularly the public in the rural districts, are in real danger of soon not getting the kind of medical service for their ordinary ills which they ought to have because the medical colleges are not turning out a sufficient number of general practitioners. After all, fully ninety per cent. of human ailments are best dealt with by the properly trained general practitioner. *Second*, that the public in our cities are being over-specialized upon and are sometimes treated for conditions that exist only in the fertile brains of specialists. And *finally*, the specialties are being so over-crowded particularly in the large cities, that many of the younger men will find it impossible to make a decent living in the specialty for which they have spent years in preparation and when they are forced out of the specialty they will usually find themselves poorly prepared for the general practice of medicine, yes, and when one of these young men, after spending eight or ten years or even longer in preparing himself for his specialty, utterly fails, as some of them actually do even now, it not only is a great economic loss to the state and nation, but a real human tragedy.

THE REFORMATION

We have now considered at some length one of the chief affections that modern medicine is suffering from. Let us now briefly consider the causes which have led to this state of affairs, then prescribe a remedy and finally offer a prognosis.

Causes.—The chief causes for present conditions are: (A). The unprecedented progress in the science and art of medicine in a relatively short period of time rather upsetting all precedents, and the lack of complete adjustment to the new conditions. (B). Previously inadequate

supply hence real need for specialists. (C). Greater popularity and better remuneration for specialists with the natural consequence that the pendulum has swung too far in the way of specialization.

Remedy.—The remedy I would consider under several headings: *First*, a thorough understanding of the real situation. *Second*, a fundamental change in medical education which would consist in a deliberate attempt to educate medical students to become proficient as general practitioners of medicine. This would require some very profound changes in our medical schools. The four-year course in the medical college with the additional interne year should be made intensely practical. This can only be done if a much larger per cent. or better still if all of the teachers in the fundamental branches, are men who have had extensive personal experience in the practice of medicine. At the present time some of our medical schools have no men with practical experience teaching the fundamental branches with the result that the student learns a lot of very interesting scientific facts which have little or no bearing upon the actual practice of medicine and he fails to learn many practical things that he sorely needs when he gets into the active practice of his profession.

These scientific non-practical lecturers are very apt to drone out their lectures in a monotone, not emphasizing the important points beyond the others for the simple reason that they do not know which facts are really essential and important. Then when the student gets into the applied clinical branches, he is utterly bewildered and lost. Later he comes under the tutelage of men, most of whom have specialized so long and to such a degree that they are out of touch with the problems of general medicine. This can only be corrected if all of the teachers in the applied clinical branches possess broad general training and experience before they take up a specialty and that they then be requested to bring out the great fundamentals of their specialty as applied to the general practice of medicine without going into hair-splitting details. The greatest medical teacher is not necessarily he who knows the greatest number of scientific facts, but he who can impart to his students the greatest amount of useful information in the least possible time.

In addition, our textbooks should be rewritten so as to differentiate between the essentials and the non-essentials and the medical teachers and the medical examiners of state boards should come to some agreement as to what candidates for graduation and licensure shall be examined upon. Some years ago it would have been almost impossible for any recent graduate to secure a license to practice in any state in the union without a most thorough knowledge of Erlich's side chain theory and yet I would like to know just what a knowledge of this theory has to do with the successful practice of general medicine. To-

day a medical student has to learn innumerable useless facts in *materia medica* at the expense of a great deal of time and energy, time and energy which had better be spent on a thorough study of a much smaller number of important drugs. And so on in practically all of the branches which are being taught in our medical schools.

And finally, we should have at least one man in each medical school with extensive experience, both in life in general and the practice of medicine in all its branches, who can give to the senior students a thorough course in medical economics so that the student, when he starts out to make a living, shall know how to handle this important phase of the problem.

Of what value is all his scientific knowledge if he does not know how to handle the problems that arise every day in the practice of a busy practitioner? If senior students are given such a course, we shall not again experience the humiliating spectacle of so many of our medical men falling into the net of the compulsory health insurance, state medicine and health center quacks and propagandists or other visionary uplifters who shall appear on the medical horizon from time to time in the future.

Prognosis.—Now as to prognosis: I am neither a prophet nor the son of a prophet, but I will make a guess that most of the young men, who are now so intensely preparing themselves for the various specialities, are going to find hard sledding ahead and even some of the specialists, who are already engaged in the practice of their specialty, are going to come across some bare spots, particularly if we are to have a long period of financial depression, for after all a very considerable per cent. of the service rendered by the

specialist comes under the heading of luxuries, service which the patient can do without and which he will do without during periods of financial stress. Medically we are rapidly approaching the condition of the European countries in this respect, *namely*, that there are few if any new openings left for specialists. Nearly every town of 50,000 inhabitants and over has its full quota of specialists and future specialists will practically have to wait for openings, for some one to die or retire. However, let us get what comfort we can from the following incident:

"An optimist fell ten stories;
As he passed each window-bar,
He shouted to his friends inside,
'All's well. So far!'"

The report continues: "We caught him on the thirteenth bounce. He was whistling 'It might have been worse.'" Yes, things might be worse and have been worse, if we would believe Herodotus, who wrote the following about Egypt about 450 years B. C.: "The art of medicine among us is distributed thus: Each physician is a physician of one disease and of no more. The whole country is full of physicians."

May we prevent that this can ever be truly said of our own country and may we soon see the day when every medical student will receive the necessary practical training which will put him in position to become a good general practitioner and then the time will soon be here when the general practitioner will again come into the esteem and respect which is due to the tried, true and trusted family physician.

2155 CLEVELAND AVE.

Christmas Seal Sale



The cheerful little Christmas seal, the sale of which around Christmas time each year finances the year around campaign against tuberculosis, has again arrived and the machinery is being set up for the 1921 campaign for the

sale of the seals.

James A. Maddox of Columbus, former president of the Columbus Rotary Club, is chairman of the state committee and Mr. A. E. McKee of Columbus, editorial writer for the *Ohio State Journal*, is chairman of the educational committee composed of leading newspaper men.

Other members of the general committee are: Dr. Wells Teachnor, Columbus, president of the State Medical Association; Miss Laura Logan, Cincinnati, president State Association of Graduate Nurses; Mr. H. M. Highfield, Zanesville, Ohio State Pharmaceutical Association;

Dr. H. M. Seamans, Columbus, Ohio State Dental Society; R. R. Whitmer, Dayton, Funeral Directors and Embalmers Association; Dr. C. H. Case, Akron, Ohio Veterinary Medical Association; Dr. W. J. Blackburn, Dayton, Homeopathic Medical Society; Dr. R. H. Singleton, Cleveland, Ohio Osteopathic Society; Dr. A. C. Bachmeyer, Cincinnati, Ohio Hospital Association; Dr. Byron Nellans, Cincinnati, Ohio Eclectic Medical Association; Dr. H. H. Snively, Columbus, State Director of Health; Mr. Vernon M. Riegel, Columbus, State Director of Education; Mrs. Dora Sandoe Bachman, Columbus, Ohio Women's Federation.

Sale of the seals starts December 1. Thirty million seals is the quota for Ohio. The proceeds go to finance the work of the Ohio Public Health Association and its affiliated bodies.

Every time you read a patent medicine advertisement you wonder why the poor undertakers do not get discouraged and close up shop.—The Late Luke McLuke.

Enlargement of Preventive and Correctional Work with the Centralization of Medical and Mental Supervision Recommended by State Board of Administration

Emphasizing the value and necessity of a greater utilization of the state institutions under the State Department of Public Welfare, a comprehensive program of preventive, remedial and corrective treatment in dealing with the wards of the state, insane, feeble-minded, epileptic and criminal, with a centralization of medical and mental supervision, of interest to forward-looking citizens of Ohio and especially to members of the medical profession of Ohio, is contained in a detailed and carefully prepared report just completed by the former State Board of Administration as a policy program for the Department of Welfare and submitted to the governor.

Perhaps no other state department under the new reorganization system has such a variety of duties and such responsibilities as the Division of Welfare of which Howard S. MacAyeal of Akron is director.

With the score or more of state penal, correctional and charitable institutions previously under the Board of Administration, with the duties of supervising indigent and delinquent children, and control over children's homes previously a function of the Board of State Charities, with the work of the pardon and parole board, and with the administrative functions of the Commission for the Blind all combined in his department, Mr. MacAyeal has a distinct opportunity for service but a multiplicity of difficult problems.

ANALYSIS OF NEEDS OF STATE WARDS

The formal communication to the governor which prefaces the report calls attention to the imperative need of a more thorough understanding of the physical and mental condition of each state ward, in the following words:

"Our study has convinced us that the state is not spending a sufficient proportion of its resources upon corrective, remedial and preventive work. The state is spending annually millions of dollars to house and care for an ever increasing number of insane, feeble-minded, epileptic and criminal persons, and only a few thousand dollars to study the nature and cause of these conditions and the proper treatment for these unfortunate persons. The one agency which the state has developed so far to do real constructive preventive work, viz., the Bureau of Juvenile Research, has been inadequately supported, both financially and in other ways. We recommend an expansion of the activities of this bureau so that the state may be guided by scientific knowledge in dealing with its human problems. Intelligent treatment of the human beings who come under the care and control of the state must be based upon an understanding of the physical and men-

tal condition and personality of each individual. Such analysis this bureau is equipped to make. When this is done, the classification, segregation and treatment can be adapted to the peculiar need of each person.

COMPLETE PHYSICAL AND MENTAL EXAMINATION

"We have recommended that the state take only the first step at this time by making complete mental and physical examinations of every juvenile offender committed to a state institution. Ultimately, we believe such examination should be made of every juvenile offender appearing before the juvenile court and still more fundamental will be the need that this examination be given to every school child who is three or more years retarded and is not making satisfactory adjustment to school environment."

The report is based on a survey and quotes facts and statistics relative to each state institution, upon which are formulated conclusions and recommendations along broad lines for a general policy for the state in the administration of the Department of Public Welfare in the future.

As a first step complete physical and mental examinations are recommended for every juvenile offender committed to a state institution, with the ultimate hope expressed for the adoption of a fundamental policy in thorough examination of every school child, especially those who are retarded or who are not making satisfactory adjustment to school environment.

The program as outlined also expresses the hope for the ultimate adoption of a system for such thorough type of examination for every adult offender committed to a penal institution. It is pointed out that by the provision of adequate medical service in the institution, accompanied by research and investigation, preventive work will be possible, resulting both in greater number of cures and in actual economy. On this point the communication states:

"We believe our insane hospitals are not meeting the needs of the times. With few exceptions, the medical work is woefully inadequate, and research and investigation is almost entirely neglected. Preventive work has hardly been started. The prompt recognition and correction of medical and surgical diseases, co-existent with the disordered mental states, will undoubtedly result in cures in many early cases and improvement in others sufficient to permit of their early discharge from the institutions. Money effectively spent to accomplish this result will be a good investment, because the state will reap the benefit of restoring these persons to economic independence, while

at the same time, maintenance cost and capital outlay for additional buildings will be lessened. The cost of maintaining the state hospitals in 1920 was over three million dollars. There were over two thousand eight hundred ninety-five insane patients admitted for the first time in 1920; the next year three thousand more and so on with each succeeding year. These people are our relations, our friends, our neighbors. Their number is ever increasing and will continue to increase unless we begin definite efforts to stem the tide."

MENTAL DEFECTIVENESS A COMMON PROBLEM

Statistics are quoted to show that the number of the mentally defective dovetails with every other social, public health and human welfare problem; that it concerns the home, the schools, the churches, the industries, the courts and democracy itself.

"It is estimated that there are twenty-one thousand feeble-minded persons in the state, of which number ten thousand need institutional care. The state has provisions for only three thousand. It will be vastly cheaper to train, supervise and institutionalize these persons and prevent their becoming criminals and committing depredations upon society than it will be to permit them to become a menace to society by committing crimes, spreading venereal diseases and breeding defective children. For these reasons, we are recommending the immediate enlargement of the Orient Custodial Farm to bring the capacity up to two thousand and the construction of another institution for the feeble-minded in the northeastern part of the state where the population is increasing most rapidly," says the report.

RELATION OF GENERAL HEALTH TO MENTAL DISEASE

Other recommendations include elimination of overcrowding in the various state institutions; elimination of idle houses in penal institutions; steady work for all those physically able, an enlargement of the penitentiary brick plant; and proper segregation of various types of cases in the institution for the feeble-minded and insane; with a greater coordination among departments for the prevention of crime and insanity, with more attention to the relation between ill health and health and insanity. On this point the report points out:

"Much mental disease is said to be the result of general physical illness and its prevention depends upon success with which the general health of the population is maintained. A large part of insanity, in all probability, results from physical ill health, infection, malnutrition, and intoxication, alcoholic or drug, and all of these causes are preventable. The problem of the prevention of paresis, which is responsible for about one-fifth of all the made admissions to the hospital for the insane, is a part of a larger problem of the prevention of psychoses."

FUNDAMENTAL PRINCIPLES

Among the fundamental principles emphasized throughout the report are:

1. The necessity for economy, but economy in terms of product.
2. The cooperation of the work of the institutions with other departments such as the State Department of Health.
3. The expansion of control, so that the intelligence and skill centered at the institutions may reach to defectives throughout society.
4. The expansion, by such control, of preventive work, so that the population of institutions may be decreased.
5. The classification of inmates of the institutions, to secure segregation of types, and to assist the curable.
6. The improvement of facilities for curables and the enlargement of a capable personnel staff to secure above results.
7. The improvement of the material fabrics.
8. Economy of operation.
9. Provisions for the future expansion of the work in accord with the best methods now available.

COMMISSIONS RECOMMENDED

The appointment of the three commissions to study and report upon several problems is recommended as follows:

"(a) A commission to study the whole penal problem and particularly to revise the plans for the new penitentiary, based upon an analysis of the present penal population and the best practices in other states.

"(b) A commission to study the blind problem to determine the most fruitful avenues of employment to the blind and to outline the scope and activities of the state school for the blind.

"(c) A commission to determine whether the state should purchase Longview Hospital, and upon what basis.

"These special commissions should have no administrative duties and should cease to function upon the completion of their reports. The reason they are recommended is because it seems unreasonable to expect that the Director of Public Welfare with all his administrative duties, would have time to make such studies."

ECONOMY MEASURED IN TERMS OF PRODUCT

To enable the Department of Welfare to more adequately compensate the medical staff in the state institutions and increase the facilities looking toward definite results based on sound business principles, it is pointed out to the governor that "The state institutions should, at all times, be operated with the strictest economy. Especially at this time during reconstruction when the business of the country is called upon to save and conserve to the utmost, is it imperative that the state should set the example. But we must not practice false economy. We should recognize that

true economy must be measured in terms of product. If the personnel of our institutions are not selected and held in terms of their fitness because we are unwilling to pay adequate salary or wage, we are not practicing sound economy; particularly if by a comparatively small increase in expenditure measured in terms of capital invested, we are able to turn out the type of product for which these institutions are created. We secured in our budget appropriation a special fund of \$320,000 per annum for the express purpose of providing money for improving the character of personal service throughout all the institutions. It was distinctly understood that this sum would not be distributed pro rata among the officers and employees regardless of efficiency, but would be used only for rewarding the efficient, building up the organization and increasing the quality of service rendered. We believe that when the sound business principle back of this plan is thoroughly appreciated, the funds will be made readily available to the director of public welfare for this purpose by those who now have control over them."

DEVELOPMENT OF CENTRAL RESEARCH LABORATORY

That one of the most serious shortcomings in the state institutions is the woeful inadequacy of medical supervision, the examination, care and treatment of patients and the lack of scientific research and preventive work, is stressed and illustrated throughout the report.

That the present Bureau of Juvenile Research may be so modified, with an increase in medical facilities and an emphasis on physical as well as mental examination, is recommended to the end that this bureau will ultimately become the central research laboratory for all the purposes connected with the management of the various state institutions. In this connection the report of the special legislative committee on the Bureau of Juvenile Research, reproduced in the August issue of *The Ohio State Medical Journal* is appended to the report.

As an approach to a solution of the problem of the unfit—mental and physical, an ultimate physiological measure, by the adoption of the principle of "unsexing", is recommended in the report. This principle of sterilization so frequently debated but now generally recognized, is recommended only after the thorough adoption of a plan for segregation of the various classes of state wards, to the end that those cases which are probably curable may not be hampered by the routine custodial care to which the chronic cases must necessarily be subjected.

On the question of segregation, the report recommends that the chronic insane patients be separated from the hopeful, curable cases, and that different types of supervision and control be employed in dealing with these separate groups. On this point the report says:

"The chronic insane patients who are in good

physical condition and who require long continued care should be segregated and housed in suitable buildings and be employed in farming, and gardening work. This would permit of the development of a real psychopathic hospital whereby the medical and nursing staff could concentrate their efforts and interests upon the curable cases.

"We recommend that steps be taken at once to organize consulting staffs at our state hospitals. The start should be made at three or four of the hospitals located in the larger cities.

"Clinics should gradually be developed by each hospital for the purpose of giving advice and treatment to early cases of nervous mental diseases of the community.

"Some changes in the organization of hospital administration should be effected so as to relieve the medical superintendents of a large amount of the routine work involved in the management of the physical plant.

"Field workers should be employed at state hospitals for the purpose of securing information regarding family histories and environment of patients and for supervising patients after they leave the hospitals. Efforts should be made to use as far as possible the field investigators of the Department of Charities."

In those penal institutions where a full-time resident physician is not already provided this service is recommended.

Based on a statistical report of the various state institutions, with a presentation of the class of service now available and possible when these recommendations are carried out, the report emphasizes the necessity of proper classification of state wards before they are placed or segregated with the ultimate purpose of making those self-supporting or nearly so who are physically able to work, and to make available the best possible medical treatment afforded in modern hospitals to those hopeful curative cases which may be expected to recover if properly treated.

The report deals at some length with the Ohio State Tuberculosis Sanatorium and recommends the organization of competently conducted clinics with a greater use of the institution as a training school for the medical and nursing professions in the care and treatment of tuberculosis, and as the central point in educational effort and place for experimentation and research. This latter is in line with the series of tuberculosis clinics being arranged throughout Ohio for the coming months.

During the four months that the board members were actively in charge of the state institutions, a detailed study was made of the needs, the result of which was the increased appropriations together with the comprehensive program of recommendations for future operation.

E. C. Shaw, former vice president and general manager of the B. F. Goodrich Co., Akron, and Marshall Sheppey, of Toledo, were the first two members of the board named. They were virtual-

ly drafted into state service at a meeting of representative business men summoned to Columbus in January by the governor to discuss plans for state institutions.

Later Dr. E. M. Baehr, psychiatrist and assistant professor at the University of Cincinnati,

and Dr. I. B. Harris, a Columbus surgeon, were named to complete the membership. Then shortly after assuming his duties, Mr. Sheppey resigned. The board members elected Mr. Shaw chairman in which capacity he served until the administrative code became effective July 1st.



NEWS NOTES of OHIO

Cleveland—Dr. W. T. Barger, formerly of Cleveland, who for the past two years has been in Red Cross work in Siberia and Europe, has accepted the position of house physician in the American Hospital of Paris.

Warren—News has been received of the death of Dr. C. S. Ward, former local resident, in Los Angeles, in September. Dr. Ward practiced medicine here for many years and was an active promoter of the Warren City Hospital.

Dayton—Drs. S. H. Ashmun and L. C. Court-right, city school and district physicians, respectively, were granted a year's leave of absence and left for New York, October 1, to take up post-graduate work. During their absence, Drs. O. C. Henderson and L. C. Stutsman will serve in their positions.

Cincinnati—Dr. Reuben J. Erickson of this city and Miss Dorothy Dohme of Baltimore, Maryland, were married at Blue Hill, Maine, September 17.

Columbus—Dr. Frank F. Schmidt, a 1920 graduate of Ohio State University College of Medicine and for some time past an interne at St. Francis Hospital, sailed, October 1, for Europe, where he will engage in two years' post-graduate study in France and Austria.

Washington C. H.—Dr. A. S. Stemler, county health commissioner, has moved to this city from Good Hope.

Newark—Dr. J. G. Shirer is the newly-elected president of the Baltimore and Ohio Surgeons' Association comprising 700 members. Dr. Shirer has been connected with the company for 16 years.

Cleveland—Dr. M. Paul Motto of this city, who has been serving as assistant director of the department of ophthalmology of the New York Post-Graduate Medical School, has been appointed clinical assistant to Dr. Fuchs of Vienna.

Cincinnati—"Throat Conditions Among Railroad Employees" was the subject of an address by Dr. E. D. Allgaier before a meeting of the C. & O. Railroad surgeons in Richmond, Virginia, October 28.

Canton—Dr. E. D. Brant is recovering from two fractured ribs and a fractured collar bone, sustained when his automobile collided with a street car.

Columbus—Drs. Grace Welch and Alice John-

ston have been elected president and secretary-treasurer, respectively, of the Women's Medical Club of this city.

Freeport—Dr. Wilbur Karl Black has returned to his former home in Groveport after two years' practice here.

Sidney—The marriage of Dr. Cyril C. Hussey and Miss Helen Hayward, Govans, was solemnized in September. Dr. Hussey has entered practice in association with his father, Dr. M. F. Hussey.

Xenia—Dr. A. H. Middleton of Cable has been named resident physician of the Ohio Soldiers' and Sailors' Orphan Home.

Piqua—Dr. J. R. Echelbarger, a former resident of Fletcher, has opened offices here. Dr. Echelbarger recently completed six months' post-graduate eye, ear, nose and throat study in Chicago, and in the future expects to devote his entire time to that specialty.

Cincinnati—Dr. Edward Muck and Miss Margharetta Wuenker were married, September 14.

Greenville—Dr. W. A. Layer, who recently returned from post-graduate study in Chicago, has opened offices here. Dr. Layer formerly practiced at Castine.

Cleveland—Dr. R. E. Skeel, formerly of this city and now of Los Angeles, was elected president of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons at the annual meeting of the organization in September.

Cincinnati—Dr. Harris H. Vail has established his offices and private hospital in association with Dr. Derrick T. Vail at 24 East Eighth Street.

Port William—Dr. J. B. Waring has removed to Blanchester, where he has taken over the practice of Dr. Robert Conard.

Post-Graduate Schedule Nears Completion

With but one meeting yet on the schedule, the 1921 series of group meetings for post-graduate study arranged under the direction of the Committee on Medical Education of the State Association, is practically completed. The remaining meeting will be held at Hamilton on Wednesday, November 2, when Dr. Roger Morris, professor of medicine at the University of Cincinnati, will be the lecturer on "Routine Physical Diagnosis." Thus far meetings have been addressed at Xenia, Piqua, Athens, Uhrichsville, Mt. Vernon, Lancaster and Lima by Dr. J. H. J. Upham of Columbus; Painesville, Bowling Green, Alliance, Kent, Elyria, Galion and Tiffin by Dr. R. K. Updegraff of Cleveland; and Portsmouth by Dr. Morris.

Observance of Stringent Precautions to Control Diphtheria Situation Urged by State Health Department

During the recent conference of health commissioners held in Columbus the State Department of Health issued warnings in regard to the state-wide prevalence of diphtheria and called attention to measures for the prevention. The number of cases of diphtheria reported each month of this year has been consistently higher than last year, as the following table shows:

DIPHTHERIA CASES REPORTED TO STATE DEPARTMENT OF HEALTH

	1920	1921
January	630	1266
February	436	361
March	466	662
April	371	640
May	319	657
June	294	569
July	267	512
August	348	842
September	709	1490
	3840	7599

There have been just about twice as many cases reported this year as last, and preliminary figures for October indicate that the increased number of reports is not lessening. Unless prompt action is taken the death rate from diphtheria will be very high this year.

While diphtheria is prevalent in many communities, no section of the state has a monopoly on the disease, and it is so well seeded in every section that the most stringent precautions must be practiced by every physician and the public. The State Department of Health has asked physicians to cooperate in the following particulars:

Consider every case of sore throat as possible diphtheria until the contrary is proved.

Give an adequate dose of antitoxin to every case you suspect of diphtheria immediately.

Submit cultures from all cases of sore throat.

Consider every case of croup which does not yield to ordinary remedies in a few hours as a true case of membranous or diphtheritic croup and give an adequate dose of antitoxin.

Locate a physician capable of intubating and call him at once in all cases of membranous croup.

Give antitoxin to all persons exposed to diphtheria.

Do not ask the health commissioner to release any case of diphtheria until two release cultures taken consecutively are negative.

Never wait for bacteriological confirmation of your diagnosis before giving antitoxin.

Remember that if antitoxin is not given early enough diphtheria toxin will become fixed to the tissues and converted to toxone which antitoxin is powerless to neutralize.

Remember that a large percentage of persons

who come in contact with diphtheria, *including doctors and nurses*, become carriers and may spread the disease without themselves suffering from it.

Familiarize yourself with the Schick test and with toxin-antitoxin which gives fairly permanent immunity. Urge your families to test and protect their children by this means. Remember, however, that there is only one way to deal with an actual contact, and that is to give an immunizing dose of antitoxin immediately. It does not pay to temporize with the Schick test and with toxin-antitoxin in the presence of an actual contact, for the immunity conferred by this means takes too long to develop to be of value. Immunity conferred by antitoxin is effective immediately but passes off quickly.

Lastly, have the thought of diphtheria constantly in the back of your mind so that no obscure case of nasal or laryngeal type will escape detection.

Early Diagnosis of Membranous Croup, Probable Diphtheritic Aftermath

A physician of many years' experience recently told Health Director Snively that the average doctor always loses his first case of membranous croup. To emphasize his remarks he pointed to nine recent deaths from that cause in which the nature of the disease was not suspected until too late. No case of croup need die if a physician is called in time and recognizes the disease promptly.

In view of the extreme prevalence of diphtheria at the present time, and the likelihood that membranous croup will be more common than usual this fall and winter, physicians are asked by the State Department of Health to bear in mind the following simple facts in regard to croup.

There are two kinds of croup: false or spasmodic croup caused by spasm of the muscles of the larynx, and membranous croup due to the formation in the larynx of a tough slimy deposit which shuts off the breath and chokes the child to death. The latter form is caused by the diphtheria bacillus.

Spasmodic croup comes on suddenly, usually in the night, without previous warning excepting possibly a slight cold. The child is often very much distressed, breathing noisily and with difficulty, voice husky and cough croupy. Remedies which cause the child to vomit give almost immediate relief, and even without treatment improvement may take place rapidly. In the morning the child shows no ill effects. This performance is generally repeated for several consecutive nights and between times the patient suffers very little inconvenience. This form of

croup is very alarming to parents but is not serious.

Membranous croup on the other hand is just as dangerous as spasmodic croup is harmless, and unless properly handled usually kills. This form of croup comes on gradually, often preceded by sore throat in the patient or some other member of the family. It grows progressively worse, and simple remedies have no effect. Unless antitoxin is given the slimy deposit in the larynx begins to choke the child and a struggle for life ensues. The patient crawls restlessly over the bed, each difficult breath caving in the spaces between the ribs, the lower end of the breast bone and the pit of the stomach. When such a child ceases fighting and lies exhausted, white of face, blue of lips and panting laborously, death is a matter of minutes or seconds; and if relief is attempted at this stage it will probably come too late. Often the parents think the child is better because it is quiet, whereas it has stopped struggling because it is utterly exhausted.

What is the physician to do when called to see a case of croup. He must first make up his mind as to whether he is dealing with spasmodic or membranous croup.

If the croup came on gradually, preceded or accompanied by sore throat, with white, gray or yellow spots, he must suspect true croup and give a liberal dose of antitoxin. *He should remember, however, that true membranous croup of the most dangerous character often occurs without the least sign of it in the throat.*

If the physician thinks he is dealing with false or spasmodic croup, he should watch the effect of the ordinary simple remedies. He should never dismiss the case until the child shows signs of relief, and if the ordinary remedies fail to give relief in a few hours, membranous croup should be suspected and antitoxin given at once.

If the child is struggling for breath when the physician arrives, intubation is indicated. In every community a physician capable of performing intubation and possessing the necessary instruments should be located. Delay of a few hours may be fatal and records show that in nearly half the cases the intubationist arrives just after the child has died.

Antitoxin should be used in all suspicious cases of croup and sore throat without waiting for the results of bacteriological examinations. Children with membranous croup die of suffocation. If antitoxin is given early it will prevent suffocation; if given late intubation is necessary and must be done promptly.

State Medicine

(Continued from page 732)

has not always been safe in this country, as years of experience prove. The revelations of official incompetency, and not so much incompetency as dishonesty, during the recent war period, will effectually modify any theoretical appeal which the idea of state control may have.

But that there are influences in this country which are bent on bringing all the people's affairs under official scrutiny, is most apparent from the efforts now being made to create a sentiment in favor of "state medicine." This means simply: more jobs, no privacy, curtailment of freedom, the destruction of the medical profession by the discouragement of research work, and the coarsening of delicate intimacies. It means practically that what the United States Shipping Board did to the shipping situation of the country, "state medicine" would be permitted to do to the people's health.

The most astonishing feature of this propaganda is the assumption that the proposal *could* be made attractive to the American people. Most cities have city physicians now, and most counties have county physicians, and no one rests under any doubt of the quality of the services rendered. The public has had a wide experience in going to its officials for sufficient water, heat, light, school facilities, transportation service, and sufficient difficulty in getting any kind of service at all at any reasonable tax rate, to prevent its falling in love with the idea of going to its officials for medicine when it is sick. Practically, it will not work; the genius of the American people is against it.

Between family physicians and families there is a confidential relation which rests on choice and experience. It is not official. It is not altogether professional. It partakes of the confessional in large degree, and constitutes a friendly pact based on the experience of many fights with disease and death. So well recognized is this that the family physician has become a fixed figure in our lives, and with results of undoubted good, as the records generally show.

To change all this and establish a police health station, as it were, at which citizens must apply for medical aid and await the pleasure of an official doctor who is paid anyway and whose professional career does not depend on the confidence he is able to evoke by skilled and loyal service, is to suggest something which is so alien to our Americanism as almost to prove an alien course and an alien purpose.

With the growing prediction of a certain group for medicine and surgery, and with that group's constant predilection for securing control of the intimate sources of the people's confidence and strength, there is no doubt whatever as to what complexion "state medicine" would take if it were adopted.

These are times when more than at any previous period the American people must be on guard against *ideas* that are not American. The time has come for the exercise of a wholesome defensive suspicion about many things that outwardly are made to appear desirable, but inwardly conceal dangers to our fundamental traditions and liberty. And we are never more justified in our suspicions of alien influences for an alien purpose than when we see attempts made to "regiment" the American people or their private affairs.—Dearborn Independent.

ACADEMIES AND COUNTY SOCIETIES

CLEVELAND

(Lester Taylor, M. D., Secretary)

The regular meeting of the Council of the Cleveland Academy of Medicine was held at the University Club, October 11. The Program Committee reported through Dr. Sloan on the program for the coming meetings. Dr. Skeel reported for the Civic Committee on its progress in securing speakers for the various civic organizations of Cleveland. The general question was brought up of the advisability of determining the attitude of the various political candidates by means of an open letter to the press. It was moved and seconded that such an open letter to the various candidates asking for their position on general public health problems be drawn up by the Civic Committee and reported to a special Council meeting.

The Public Health Committee submitted their report through Dr. J. J. Thomas. The committee had investigated the present price of milk and it was decided as the sense of the committee that the present price was not excessive. The committee recommended that the question be referred to the County Public Health Committee for statistical study.

It was recommended that the distribution of a special sodium iodide tablet which had been prepared by the city chemist, should be effected in the public and parochial schools according to methods worked out by the Health Department, the work to be done under careful supervision, the expense to be borne by the City Health Department.

The question of the lack of ambulance service was presented and a special committee was recommended to work out a suitable solution. The committee suggested the possibility of equipping the police emergency cars with first aid apparatus and some one trained in applying it.

The committee also recommended that a special committee be appointed to cooperate with the Ohio State Medical Association and National Cancer Commission in the study of the cancer problem. It was further recommended that Dr. Wm. H. Park, bacteriologist of the New York Health Department, be invited to address the Academy of Medicine on the subject of Toxin-Antitoxin Prophylaxis of Diphtheria.

Mr. Wells then presented briefly to the Academy the policy of the Civic Committee toward quack advertising. Mr. Edward L. Green of the Better Business Commission of the Cleveland Advertising Club then explained to the Council the workings of his association and brought out along general lines the policy the Academy would have to adopt to control this

evil. He recommended that some qualified person be appointed to cooperate with him in giving him accurate information as to the exact fallacy of these advertising claims. He felt that the cases would need individual handling and requested specific complaints with adequate proof, to be filed with him.

He also advised the Academy to provide itself with adequate legal protection against improperly trained healers, and expressed the belief that fraudulent advertising, if proved fraudulent, could be eliminated. The whole question was referred to the Civic Committee for conference with Mr. Green and the working out of a suitable remedy.

A letter to the President from Dr. J. F. Baldwin in regard to the attitude of the Academy on the question of the State Medical School at Columbus was laid on the table without comment.

Dr. Sanford reported for the Legislative Committee on the developments of the coroner situation. The whole question had been worked out under the Justice Survey in the department of medical relations and a constructive program has been outlined to provide for a medical examiner in place of the present county coroner. Before this report was given to the public the Justice Survey asked that it might be presented to the Academy for their criticism and suggestions.

COLUMBUS

(James A. Beer, M.D., Secretary)

September 19.—“Current Trends in Endocrinology”, by Dr. R. G. Hoskins, head of the Department of Physiology, Ohio State University College of Medicine.

September 26.—“Thymus Hyperplasia of the New-Born”, by Dr. S. J. Goodman; discussion opened by Dr. O. H. Sellenings. “Infantile Paralysis—Etiology—Specific Therapy and Other Features”, by Dr. A. M. Steinfeld.

October 10.—“Syphilis and Gonorrhea”, by Drs. J. A. Frank and P. M. Wright; discussion opened by Dr. W. N. Taylor.

October 17.—“Nephritis”, by Dr. Halbert B. Blakey; discussion opened by Dr. Hugh A. Baldwin.

SECOND DISTRICT

Montgomery County Medical Society has elected the following officers: Drs. C. N. Chrisman, president; P. L. Gunkel, R. R. Shank, R. W. Adkins, vice-presidents; A. W. Carley, secretary; F. D. Crowl, treasurer; C. C. McLean, delegate; H. Farber, alternate; and Webster Smith, legislative committeeman.

THIRD DISTRICT

Hancock County Medical Society held its opening session of the year, September 15. Reports of interesting clinical cases were made by Drs. Tritch, Hartman, Firmin and Zopfi. Plans were made for the coming year. All meetings are to be held early in the evening and be preceded by

a dinner. A resolution, endorsing the continued maintenance and increased efficiency of the medical department of the State university, was passed.

A communication from State Director of Health Snively, was received, explaining a program being planned for the fight against tuberculosis throughout the state.—Nelia B. Kennedy, Secretary.

Logan County Medical Society met in Bellefontaine, October 6. Essayists were Drs. Carrie Richeson and W. C. Pay.—News Clipping.

Marion County Medical Society held its regular meeting in Marion, September 6. After a short business session the meeting was given over to the presentation of fifteen case reports, the discussion of which proved interesting and helpful. The meeting of October 4th was well attended by both city and county members. Dr. C. L. Baker of Kirkpatrick presented an instructive case of typhoid fever with complications, which was thoroughly discussed. Dr. F. E. Mahle read a paper on "Infant Feeding", discussed by Drs. Weeks, Lewis and Wiant. The society voted to subscribe for the Case Reports from the Massachusetts General Hospital and to use them for study. The matter of food inspection was discussed at length and a motion adopted that the president appoint a committee of three members to interest the proper state department in securing adequate food inspection for Marion County. Dentists of the county will be guests at the November meeting, when the subject of focal infections will be discussed.—J. A. Dodd, Secretary.

Mercer County Medical Society met at the Otis Hospital, Celina, September 13, at the request of Dr. L. M. Otis, to assist in dedicating the hospital to the use of the medical profession of the county. The regular monthly program was carried out by Dr. M. B. Fishbaugh reading a paper on "Empyema," which was complete in all details, followed by a free discussion of the subject. Then followed the election of officers for 1922, which resulted as follows: Drs. J. E. Hattery, president; J. T. Gibbons, vice-president; D. H. Richardson, secretary; L. D. Brumm, treasurer; M. L. Downing, delegate; P. F. Weaver, alternate, and W. C. Stubbs, censor.

At the conclusion of the business of the society, Dr. Otis invited the physicians to the dining room, where the nurse force served an elaborate and delicious supper. There was a large attendance of interested and enthusiastic doctors from all parts of the county, who inspected the hospital critically before and after the meeting and were loud in their praise and admiration of its complete arrangement and equipment. Dr. Otis was given a vote of thanks for his hospitable entertainment and his enterprise and energy in providing the elaborate arrangements for the care of the sick public, and the magnanimity of his invitation to all the doctors of the county to use

the hospital for the care of their patients under their own professional care.—D. H. Richardson, Secretary.

FOURTH DISTRICT

Sandusky County Medical Society was entertained at the DeMars Club, Fremont, September 29, by Dr. E. M. Ickes. Twenty members were present and worked up an appetite for a splendid chicken dinner by playing indoor baseball. In the scientific program which followed the repast, Dr. M. O. Phillips read a well-prepared paper on "Symptoms versus Signs in Diagnosis." Dr. Phillips made a strong plea for observation of the fundamentals in routine examination. He cautioned against drawing conclusions from too few facts. He condemned snapshot diagnosis and frowned upon accepting too readily the verdict of laboratory and X-ray, saying that all these agencies should be used in checking one against the other. The paper was well received and highly commended. Dr. C. J. Weir of Bellevue gave a resume of unusual obstetric cases. It was most interesting that so many such difficult cases should fall to the lot of a man in a small community in so few years. All delighted in the report and the successful manner in which the cases were treated. This type of discussion never fails to be interesting and instructive. In response to an invitation from the Kiwanis Club that a committee be appointed to confer on the proposed filtration and softening plant the society went on record as favoring the project and Drs. E. M. Ickes, W. H. Booth and C. I. Kuntz were named to membership on the committee. The invitation to participate in consideration of civic affairs is received as a good omen of the progress of medical organization. Dr. Ickes was given a vote of thanks for his cordial entertainment.—C. I. Kuntz, Secretary.

FIFTH DISTRICT

Erie County Medical Society's first meeting of the fall and winter season was held at the Sunyendeand Club, Sandusky, September 29. Papers were read by Drs. J. T. Haynes, W. H. Pollock and R. E. Garnhart, and two interesting skin cases were presented by Dr. W. T. Fenker. The new industrial rehabilitation law was discussed.—News Clipping.

Lorain County Medical Society held a most successful meeting at Amherst, September 20, with 23 medical men, five nurses and one minister present. The latter, who saw 18 months' service overseas gave an inspirational talk which was much appreciated. A committee was appointed to consider the proposal to establish a medical library with money in the treasury or otherwise invest the money. Drs. French and Valloyd Adair reported on the annual conference of health commissioners in Columbus, and Dr. McIntosh, district health commissioner, discussed his work and plans for the future.—W. E. Hart, Secretary.

Lake County Medical Society met in regular

monthly session at the Lake County General Hospital, October 3. The speaker for the evening was Dr. John Tucker of Cleveland and his subject was "Focal Infections." He said in part that the subject was not new, but an old subject brought to new life; that such infections cause anemia, neuritis, neurasthenia, asthma, most acute and chronic conditions; that the chief sites of infection were the teeth, tonsils, nose, mastoid, rectum; that the poison gradually collects and later gets into the blood stream and lymphatics, causing the distant disease; that the drainage in the teeth and tonsils is not sufficient to get rid of the poison, hence the pleura, peritoneum, joints, gall-bladder, nerves, etc., get the infection. His explanation of the "Mutation Theory" was a most interesting and fitting climax for the address.—E. S. Jones, Secretary

SIXTH DISTRICT

Holmes County Medical Society, in session at Millersburg, September 13, elected Dr. M. B. Pomerene of Millersburg as president, and re-elected Dr. A. T. Cole as secretary-treasurer for the ensuing year.—A. T. Cole, Secretary.

Stark County Medical Society's program at Canton, September 20, included: "The Use of Local Anesthesia in Major Operations—Lantern Demonstration," Joseph L. DeCourcy, Cincinnati; "Removal of Foreign Bodies from Eye by Magnet—Lantern Demonstration," C. A. Crane, Canton; "Organization from Medical Topics," D. W. Stevenson, Akron, councilor of the Sixth District of the State Association.—News Clipping.

Summit County Medical Society devoted its October meeting to memorial services honoring the late Dr. Harold Hill Jacobs. Two eloquent eulogies upon Dr. Jacobs' life were given by Dr. W. S. Chase on "The Friend", and Dr. C. E. Held on "The Physician", and Dr. J. M. Denison presented a poem. An excellent lecture on "Infections" was given by Dr. C. A. Hamann of Cleveland, professor of applied anatomy and clinical surgery, Western Reserve University. Attendance 114 from Wadsworth, Dolystown, Cleveland, Kenmore and Akron.—A. S. McCormick, Secretary.

SEVENTH DISTRICT

Coshocton County Medical Society, meeting in monthly session at Coshocton, September 29, heard addresses on "The Diseases and Treatment of the Accessory Sinuses" by Dr. Edmund Cone, and "Constipation of Children" by Dr. E. M. Wright. Both papers were thoroughly discussed.—News Clipping.

Jefferson County Medical Society enjoyed its regular monthly gathering at the Steubenville Y. M. C. A., October 11. Following a luncheon, the scientific program, consisting of an address by Dr. W. C. Medill on "Heart Disease in Infancy and Childhood", was given.—J. R. Mossgrove, Secretary.

Tuscarawas County Medical Society met at

Dover, October 13. "Borderline Tonsillectomy Cases" was the subject of a paper presented by Dr. F. B. Larimore and discussed by Dr. S. B. McGuire. There was also a number of interesting case reports.—A. C. Dempster, secretary.

EIGHTH DISTRICT

Athens County Medical Society had as its guests on October 4th Drs. F. F. Lawrence of Columbus and John P. Sawyer of Cleveland. The former discussed "Appendicitis" from the surgical side, and the latter discussed the same subject from the medical viewpoint.—News Clipping.

Morgan County Medical Society was entertained at dinner, September 21, by Dr. Emmet Fayen, medical director of Rocky Glen Sanatorium, McConnelville. An excellent paper on "The Value of X-ray in General Practice" was read by Dr. J. M. Fassig of Zanesville.—D. G. Ralston, secretary.

Muskingum County Academy of Medicine, in session at Zanesville, October 5, had as its essayist Dr. R. E. Wells of Nashport, whose subject was "Typhoid Fever."—M. A. Loebell, secretary.

Perry County Medical Society held its regular monthly meeting at New Lexington, September 22, with an attendance of 18. Dr. A. G. Helmick of Columbus spoke on "Pediatrics."—News Clipping.

Fine Programs Feature Annual Meetings of District Societies, Promising Enthusiastic Organization Work This Winter

District meetings of the State Association were much in vogue early in October. On October 6th the Ninth District Society held its annual session at Jackson, while the Tenth District Society convened at Circleville, and on the following day the North-Western Ohio District Medical Association, comprising the Third and Fourth Districts of the State Association, met Toledo.

The Ninth District Society elected Drs. S. B. McKerrihan and J. G. Murfin, both of Portsmouth, as its president and secretary-treasurer for the coming year, succeeding Drs. J. S. Hunter and A. G. Ray, of Jackson, and chose Portsmouth as the site of its next meeting. Dr. J. S. Rardin of Portsmouth is councilor of the district. The excellent program which started at ten o'clock in the morning, with dinner at noon, and a resumption of the scientific discussion in the afternoon, included addresses on "Radium", by Dr. J. G. Murfin, Portsmouth; "State Association Activities", by Dr. Robert Carothers, Cincinnati, president-elect of the State Association; "Infantile Paralysis", by Dr. A. M. Steinfeld, Columbus; "Appendicitis", by Dr. C. D. Hoy, Columbus; "Umbilical Hernia", by Dr. J. H. Ray, Coalton; "After-care of Surgical Cases", by Dr. A. H. Dunn; "Routine Physical Diagnosis", by Dr. J. H. J. Uham, Columbus; "Physical Examination of Children and Its Relation to Public

Health", by Dr. H. T. Thornburg, Columbus; "Kidney Infections", by Dr. Hugh Baldwin, Columbus; "Acidosis", by Dr. L. D. Allard, Portsmouth; "Egyptian Experiences", by Dr. F. C. McClannahan, Tonta, Egypt; "Management of Labor", by Dr. J. T. Murchie, Portsmouth; and "Emergency Surgery", by Dr. H. A. Schirman, Portsmouth.

Attendance at the Tenth District meeting in Circleville ran well over a hundred and it is counted one of the most successful gatherings the society has enjoyed. The program was participated in by Drs. Howard Jones, Circleville; J. A. Knight, Orient; Wells Teachnor, president of the State Association; S. J. Goodman, district councilor; W. D. Deuschle, and J. F. Baldwin, Columbus. At the business session which preceded a dinner given by the Pickaway County Medical Society in honor of the visiting physicians, Drs. J. T. McCarty and Rees Philpott, of Delaware, were elected president and secretary-treasurer, and Delaware designated as the next meeting place. Dr. J. B. May of New Holland and Dr. James A. Beer of Columbus are the retiring president and secretary-treasurer.

The North-Western Association meeting was a "snappy" affair. The clinics held in East Side, Flower, Mercy, Robinwood, Toledo and St. Vincent's Hospitals, the noonday luncheons and round tables in the various hospitals, and the general session in the afternoon were all successful and those present received a new baptism of enthusiasm for their work. Speakers at the afternoon session were John F. Erdman of New York, on "Malignancy of the Large Intestine", and Dr. Herman O. Mosenthal, also of New York, on "Nephritis". Dr. C. W. Moots of Toledo is president of the district organization, and Dr. W. C. Pay of Bellefontaine, secretary. Drs. R. R. Hendershott, Tiffin, and C. W. Waggoner, Toledo, are the councilors for the two districts.

At the meeting of the Second Councilor District in Dayton in September, previously reported, Dr. Drs. C. I. Stephen of Ansonia was elected president; Dr. D. B. Conklin of Dayton, secretary; and Dr. H. C. Haning of Dayton renamed treasurer.

Union District Association in Oxford

The one hundred and eighth semi-annual meeting of Union District Medical Association in Oxford, October 27, enjoyed a good attendance and a splendid program. The meeting was held at Oxford Retreat and was presided over by Dr. C. O. Munns of Oxford, the president, with the assistance of Dr. E. E. Holland of Richmond, Indiana, as secretary. The program follows:

1. "Radium," illustrated with 20 lantern slides, Dr. C. J. Broeman, Cincinnati; discussion opened by Dr. L. F. Ross, Richmond, Indiana.

2. "Refinement in Thyroid Surgery," Dr.

Goethe Link, Indianapolis, Indiana; discussion opened by Dr. Mark Millikin, Hamilton.

3. "Pituitrin," Dr. W. A. Thompson, Liberty, Indiana; discussion opened by Dr. E. M. Glaser, Brookville, Indiana.

4. "The Recognition of Disturbances of the Heart Beat and Their Clinical Significance with Remarks of Digitalis Therapy," Dr. Roger S. Morris, Cincinnati; discussion opened by Dr. T. A. Dickey, Middletown.

5. "The Endocrin Glands," Dr. Hugh Moore, Oxford; discussion opened by Dr. J. D. Shonwald, College Corner, Indiana.

Healthers Asked to Cooperate in Inspection Program

Handicapped by a small and inadequate staff of inspectors and facing a program of inspection and regulation which "looms up like a mountain," the state dairy and food division of the Department of Agriculture, through R. M. Black, its chief, has requested every health commissioner in the state to cooperate in a state-wide campaign for better sanitary conditions in all places where foods are produced, prepared, stored, manufactured or sold, as well for eliminating from the markets all adulterated, misbranded or deceptive foods, drugs, confections, proprietary preparations and the like.

The division has but 14 inspectors, upon whom rests the responsibility for inspecting all dairies, groceries, canneries, confectionaries, meat markets, slaughtering houses and other places.

The division will soon complete a code of rules and regulations for guidance of inspectors in dealing with sanitary conditions and pure food and drug regulations. The code and copies of the food and drug laws will be sent to the health commissioners together with copies of a bulletin to be issued from time to time, in which all foods, confectionery, drugs, proprietary medicines and other articles which are sold in violation of the laws will be listed. The name of the product, name of manufacturer or vender and an analysis of the product will be given in the bulletin, making identification on the shelves of establishments and stores an easy matter.

A Curio

In one hall of the great Museum was a steel case with heavy bars protecting the glass front. Inside the case rested an ordinary business statement.

"And what is this?" we asked the Guide.

"That is the rarest document in the Museum," replied the Guide. "That is a doctor's bill that was paid on the day after it was presented!"—The late Luke McLuke.

Tuberculosis Diagnostic Clinics to Extend Program of the State Health Service

Coincident with the opening of the 14th annual sale of Christmas seals to fight tuberculosis there will be launched in the state of Ohio a series of tuberculosis clinics to be conducted by the bureau of Tuberculosis of the State Department of Health in cooperation with the Ohio Public Health Association, the Ohio State Sanatorium and the Ohio State Medical Association.

The aims of these clinics are:

1. To assist local physicians in the diagnosis of early or suspected cases of tuberculosis and offer suggestions relative to the accredited methods of treatment.

2. To educate the tuberculosis patient and his family regarding the prevention and cure of tuberculosis and to prevent the spread of the disease through careless habits.

3. To arouse each community to a realization of its responsibility to the end that adequate provision may be made for the care of the infected and the ultimate control of the disease.

Early diagnosis of tuberculosis is one of the most important objects of the clinics, and an effort will be made to discover the greatest possible number of early and suspected cases. It is estimated that at least 90 per cent. of those who die from this disease could be saved if the disease was diagnosed early and proper treatment carried out.

The State Department of Health has its machinery all ready to conduct the clinics in every county in the state during the next two years. Dr. J. A. Frank, chief of the tuberculosis bureau, with two nurses, Mrs. Zoe McCaleb and Miss Gertude H. Armstrong, will go out with the clinic. Tuberculosis experts in various parts of the state have volunteered their services for these

clinics and will make the diagnoses.

There are already a number of applications for the clinics, but the schedule of time for holding them has not yet been completed. They are to be arranged for jointly by the municipal and general health districts and preferably within the tuberculosis hospital district. The methods of procedure will be:

1. Preliminary meeting with county medical society and local health league or other interested society to present the objects of the clinics.

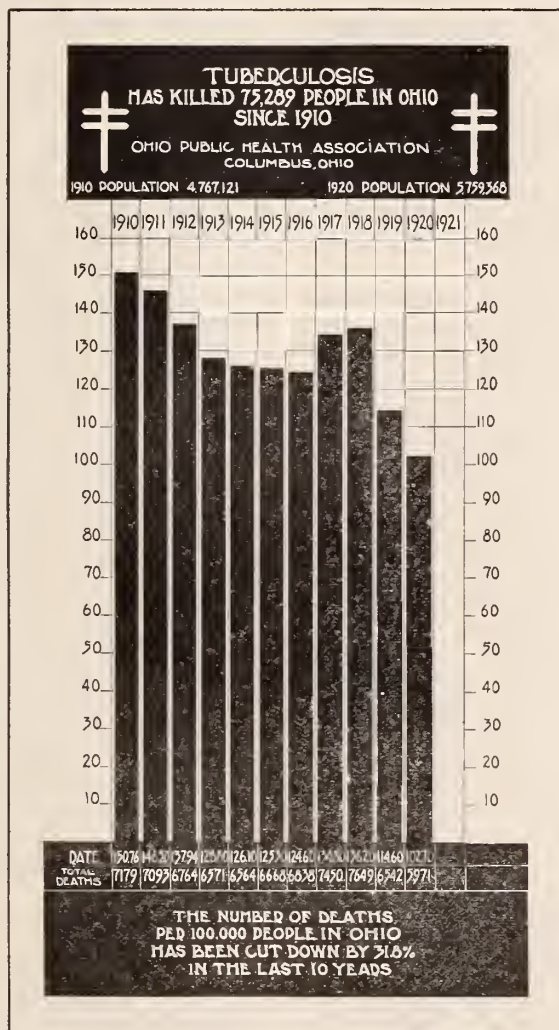
2. Preliminary survey two weeks in advance of clinic week under direction of organizing nurse with the assistance of local nurses. Physicians, schools, factories and others will be visited to make definite appointments for patients at the clinics. These appointments will be made with the knowledge and consent of the patient's physician.

3. Not more than two or three clinic days will be arranged for during the clinic week. The necessary number of diagnosticians will be provided to care for the preliminary appointments made.

4. During clinic week there will be a round table discussion with members of the local medical profession present, discussion to be opened by the diagnostician.

5. Meeting of public official and voluntary health organizations to adopt plans for permanent work in the community.

The State Department of Health expects the local physicians will find the clinics of material assistance not only from the standpoint of what they may learn but in gaining the cooperation of patients. Where the diagnosis of the specialist is made, confirming that of the general prac-



tioner, the patient is usually willing to take the proper treatment under his own doctor's supervision instead of waiting, going from one physician to another and one climate to another until he has reached the advanced stage and it is too late.

All patients attending the clinic will be referred back to their own physicians and no information as to treatment will be given at the

clinic. The patient's physician will be furnished with a copy of the diagnostician's findings and recommendations.

The clinics will no doubt bring to light cases that have not been under a physician's care at all, or possibly have been taking patent medicines. They will be advised to consult a physician and devote the funds they are wasting on nostrums to the purchase of wholesome food.

PUBLIC HEALTH NOTES

The Springfield Department of Health took drastic steps to control the diphtheria situation in October, when on receipt of numerous complaints that persons quarantined, especially for diphtheria, were breaking quarantine, the department ordered the arrest of such offenders. Thirty-four cases of diphtheria were reported on October 4, bringing the total to 210. In cooperation with the department, members of Clark County Medical Society undertook an examination of the children in every school in the city.

—Cleveland is a very healthy city this fall, as evidenced by the fact that there were only 602 deaths in September against 711 in September, 1920, a decrease of 15 per cent. The record of births in those months does not indicate any appreciable falling off in the population as only four less births were reported this year than last.

—A clinic for the needy children of Wood County has been established by the physicians of the County with headquarters at Williams Sanitarium, Bowling Green. The physicians give their services gratis and other expenses are borne by charitable organizations.

—Dr. William A. Daugherty has been appointed examining physician for Massillon school pupils making application for age and schooling certificates. Under the new state law which became effective in August, no pupil under 16 years of age is permitted to leave school. Those over 16 and under 18 must secure an age and schooling certificate, and to do so they must pass a physical examination showing their fitness to enter industry.

—The Columbus District Nursing Association has moved into more spacious and convenient quarters. The organization now has a staff of 20 nurses.

—Establishment of classes for crippled children in connection with the Tiffin public schools is being considered as an outgrowth of the crippled children's clinic conducted in that city in late September, which disclosed the fact that there are many children in the county who require special instruction because of their deformities. Sixty-seven cases were examined at the clinic, more than half of whom are curable or may be benefitted.

—Miss Helen Fife of Canton has been em-

ploied by the Red Cross as the second public health nurse in Mt. Vernon. Miss Esther Wagner, who has been appointed county public health nurse, will assume her duties January 1.

—Two thousand children in Defiance schools will receive individual medical examinations this year as the result of definite plans made recently at a joint meeting of the city boards of health and education and representatives of parochial schools.

—Cases of crippled children attending Columbus schools are being investigated with a view of furnishing those whose affliction interferes with satisfactory school work special instruction. They will be taught, in addition to academic subjects, vocational work that will help them to be self-supporting when they leave school.

—Chemists of the state and Columbus city health departments in October undertook an analysis of the milk and water supplies of the Columbus State Hospital, in an effort to locate the cause of 17 cases of typhoid fever reported from the institution.

—Successful children's diagnostic clinics were held in Carroll County, October 3; Belmont County, October 12, and Monroe County, October 13, under the joint auspices of the state and local health departments. At the Carroll County clinic 126 cases were partially examined, 17 of which were orthopedic, nine mental, and the rest general. One child was found to have active tuberculosis and three others a predisposition to it; two were found with organic heart lesions and one with a functional condition. Dr. Clarence Hyman of Cleveland was consulting orthopedist at the Carroll County clinic, and Dr. A. M. Steinfeld of Columbus at the Belmont and Monroe clinics, while Dr. H. T. Thornburgh of the State Department of Health acted as diagnostician for the general cases.

First Dues for 1922

Honors for remitting the first membership dues for the new year again go to the ladies. On October 13 Dr. Mary L. Cook, of Waynesville, treasurer of the Warren County Medical Society, certified twelve members of her organization for the year 1922. On October 15, last year, she qualified nine members for 1921. Dr. Isa Teed-Cramton of Burton, secretary-treasurer of Geauga County, was the second to register, with 1922 dues for seven of the nine members of her society, on October 18. Dr. Teed-Cramton was

also second to qualify 1921 members and the first to attain the one hundred per cent. goal last year.

Cuyahoga County Public Health Association Has Auspicious Start

With the newly organized Cuyahoga County Public Health Association in operation to aid the wide awake city and county health departments, Cleveland and Cuyahoga county expect to set a new pace for health work during the coming winter. Dr. E. A. Peterson, recently in charge of the public health department of the American Red Cross at Washington and formerly medical director of the Cleveland public schools, is director of the health association, which corrolates under one head all the activities of the privately operated health agencies of the county for the purpose of forwarding the health work of the community and giving the right sort of support and cooperation to the official public health agencies.

The governing body is a board of twelve directors chosen by the City Welfare Federation for the first year, and thereafter elected by the constituent members. Among the present directors are Drs. R. H. Bishop, Jr., Roger G. Perkins and Russel H. Birge. The object of the association, as set forth in its constitution, are:

- a. To promote the cause of public health in Cuyahoga county.
- b. The encouragement and support of organized official work for the prevention of disease.
- c. The securing of proper legislation for the prevention of disease.
- d. The encouragement of adequate provision for the prevention of disease by the establishment of hospitals, sanatoria, clinics, dispensaries, nursing services of every description, and otherwise to do all the things and acts having as their object the prevention of disease.
- e. The study of conditions regarding the prevalence of preventable diseases, and the dissemination of knowledge concerning the prevention of disease.
- f. To become a constituent member of the Ohio Public Health Association.

Foreigners Susceptible to Accidents

More than 50 per cent. of the fatal accidents which occur in Ohio industries are those of foreigners, or men who cannot read the English language, according to claims allowed under the workmen's compensation act. These men usually cannot read the precautionary measures posted by the Industrial Commission, and the employers, and are, therefore, unable to take care of themselves as well as American workmen. These warnings of danger are printed in several languages, but the foreigner either does not stop to read them, or neglects to follow the advice.

In many cases the awards are granted and paid through the consuls representing in the United States the foreign countries from which the workmen come. In practically every case the workman sends a part of his earnings back to his native land for the support of dependents.

Data gathered by the Commission in this regard shows that thousands of dollars are being sent to France, Roumania, Italy and other foreign countries by workmen in Ohio industrial plants. Upon notification of death, the Commission grants funeral and hospital expenses, and, when the proof of dependency is filed, grants the award.

Recently, in one day five of six death claims presented to the Commission were foreigners. This is above the average, but is conclusive proof that the American workman is more skilled and more able to take care of himself. Foreign workmen, fatally injured in Ohio manufacturing plants, cost the state thousands of dollars annually, and steps to improve their condition are favored by the Commission.

New Departments at Cincinnati University

Establishment of three new departments in connection with the Medical College of the University of Cincinnati, one covering tuberculosis, one of dentistry and one of dispensary instruction, has been authorized by the university directors. Heads of the new departments had not been selected at this writing.

Dr. Frank Fee has been appointed temporary head of the department of surgery; Dr. Charles Caldwell, assistant professor of surgery; Dr. O. V. Batson, assistant professor of anatomy, and Dr. Carl Little, assistant professor of radiology.

The medical classes at the university this year consist of 46 seniors, 58 juniors, 51 sophomores and 65 freshmen, with representatives from many nations including China, Japan and the West Indies.

Central States Pediatric Society

The Central States Pediatric Society will meet in Cleveland, November 7 and 8, for its seventh annual meeting. Dr. H. J. Gerstenberger of Cleveland is president of the organization; Dr. H. F. Helmholz, Evanston, Illinois, vice-president, and Dr. C. C. Grulee, Chicago, secretary-treasurer. The first day's sessions will be held at 9:00 a. m. at the Babies' Dispensary, and at 2:30 p. m. in the Cleveland Medical Library. Those of the second day will be at 9:00 a. m. at Lakeside Hospital, and at 2:00 p. m. at Western Reserve University Medical School. The session at Western Reserve will consist of demonstrations in the departments of pharmacology, anatomy, biochemistry, physiology and experimental medicine.

The Cancer Campaign

Andre Crotti, M. D., Chairman.....Columbus

F. E. Bunts, M. D.....Cleveland J. Louis Ransohoff, M. D. Cincinnati
C. W. Moots, M. D.....Toledo Don K. Martin, Sec'y.....Columbus

Prophylaxis and Treatment of Cancer

J. LOUIS RANSOHOFF, M. D., Cincinnati

Editor's Note.—When you receive this issue of *The Journal*, "Cancer Week" will be in full swing and it is to be hoped that you will be lending your cooperation in making it a success. The lesson that Dr. Ransohoff stresses particularly in this, the second in a series of papers to be published during the Ohio cancer campaign, is the responsibility of physicians in delayed diagnosis, since the surgical hope in cancer lies in diagnosis early enough to allow radical operation. In Dr. Ransohoff's opinion the treatment of choice in all forms of cancer, except cancer of the cervix and superficial skin cancer, remains surgical. Radium therapy should supersede operation in the treatment of cancer of the cervix since it is available in inoperable as well as in operable cases. It is axiomatic that a surgical operation when done for cancer should be radical, as partial operation is worse than useless. If "Cancer Week" serves to concentrate the attention of doctors on the ravages of cancer and induces them to be continuously on the lookout for its early symptoms, it will have accomplished a great deal.

ACCORDING to the most reliable estimates, 100,000 deaths occur annually in the United States. This enormous number of deaths, many of them preventable, is an appalling indictment of modern medicine. Until the cause of cancer is found, the aim of the clinician must be early diagnosis and early radical operation.

THE PHYSICIAN'S RESPONSIBILITY IN DELAYED DIAGNOSIS.

The most important single factor in cancer treatment is its early diagnosis, without which no line of treatment has the least possibility of success. In every clinic the number of *inoperable* cases seeking treatment far exceeds those which are still *operable*; this is particularly true of cancer of the digestive organs and the female genitalia. This state of affairs is an undoubted arraignment of our own profession. If the examining physician could only keep in his mind the fact that cancer is protean in its aspects, so many appalling and costly mistakes would not be made. The trend of modern medicine is toward the searching examination of every individual who applies for treatment, and away from the careless practice of medicine. Too many busy physicians merely give a patient a cursory examination and a prescription, without the thorough examination, which is the right of every one seeking treatment. This is particularly true of those cases of obscure gastro-intestinal symptoms, which so often are the warning signals of early intraperitoneal cancer. Every surgeon has had the experience of seeing a patient with a well-marked abdominal tumor, who gives a history of long-continued indigestion and obscure pain, while under so-called medical super-

vision. Pills and laxatives have been given without even the formality of removing clothes for an abdominal inspection. Cachexia and emaciation mean nothing in the diagnosis of cancer. They are indicative of the terminal stage, when the time for help has passed.

Long-continued indigestion in an adult past 40 should always suggest the possibility of cancer of the stomach. Once this suspicion is aroused, a diagnosis can almost always be made, proved or disproved by X-ray and chemical examination of the stomach contents. To await the development of a tumor is to court certain disaster, as once a tumor has developed, the possibility of a cure is usually past.

In cancer of the mucous membranes of the oral passage, a common error in diagnosis is its confusion with syphilis. This confusion is furthered by the fact that this variety of cancer is not infrequently co-existent with syphilis or ingrafted on a syphilitic basis, and consequently a positive Wassermann reaction adds to the difficulty of diagnosis, as every lesion so accompanied is not necessarily syphilitic. It is very pertinent that this variety of cancer seems to be lighted to increased activity by the administration of Salvarsan.

THE ROLE OF PROPHYLAXIS.

Oral Cancer.—In the treatment of certain varieties of cancer, prophylaxis plays a most important role. This is particularly true in cancer of the buccal mucosa and tongue, which once developed is so frequently fatal. Not infrequently cancer of the mucous membrane of the cheek is due to the irritation of a jagged tooth or a badly fitting dental plate. This constant irritation causes the formation of small ulcers, through the

continued traumatization of which a cancer may develop. I have seen this occur in a number of undoubted cases. If the jagged tooth is filed away, or if necessary even sacrificed, the ulcer heals promptly and the development of cancer is prevented. The same sort of lesion not infrequently develops from the same cause on the side of the tongue. This fact should be widely known among dentists and oral surgeons. The same holds true of the long-continued presence of leukoplakic patches on the tongue. Whatever the cause of these patches, their treatment is exceedingly difficult. Various forms of treatment should be used to insure their disappearance. In several cases I have had gratifying results with radium, causing these patches to completely disappear. In other cases seemingly clinically identical, radium has had no effect. In these cases a Wassermann test should be made, and possible syphilis sought for. There is a difference of opinion as to whether these leukoplakic patches should be excised or not. The prevalence of surgical judgment now is that they should not be excised, unless very limited in extent. I have record of a case which occurred in the practice of Dr. Joseph Ransohoff, in which 13 years after a decortication of the tongue for extensive leukoplakia, a cancer developed and proved fatal.

Stomach Cancer.—Cancer of the stomach not infrequently occurs at the site of an old indolent gastric ulcer. The surgical treatment of this ulcer will, in almost every instance, prevent the occurrence of cancer. Nearly all cases of cancer of the gall-bladder develop subsequent to the irritation of long-carried stones; the answer is obvious.

Breast Cancer.—The prophylaxis of cancer of the breast is of utmost importance. This consists in the removal of all tumors of the breast, however benign, in women over thirty. Most of these benign tumors are fibro-adenomas, which, as a rule, continue innocent throughout the life of the bearer. There are, however, a sufficient number of these tumors which have later become malignant, to make their removal mandatory. Their operation under local anesthesia is simple; the patient's stay at the hospital need rarely be longer than a day; the recovery is always prompt, so that there is no reason for allowing these tumors to remain as a possible menace and precursor of cancer. The same is true of small cysts in the breast. There is a great deal of discussion as to the place of chronic cystic mastitis in the causation of cancer. Bloodgood, at one time, believed that cancer was frequently ingrafted on this long-continued inflammatory process, and at that time advised removal of the breast. Having studied a large number of these cases, he has come to the conclusion that this correlation between chronic cystic mastitis and cancer of the breast cannot hold. It has always been my belief that the removal of the breast for

this type of disease is unnecessary mutilation. The affected part of the gland can be removed through a minor operation, or if the breast is painful, the whole breast may be resected through a Warren plastic, leaving the nipple, and the skin covering the breast in place.

The association of Paget's disease with cancer has long been known, and this condition should warrant the same radical operation as a well-developed cancer of the breast.

Genital Cancer.—According to all accounts, cancer of the cervix is frequently due to birth injuries and tears of the cervical canal, with the subsequent constant irritation of an irregular scar. This is well borne out by all actuarial statistics. According to the 1915 report of the Registrar General for England and Wales, the death rate from cancer of the uterus was 73 per cent. greater in the *married* than in the *single*. This is of undoubted significance. Again the answer is obvious. The best prophylaxis is the immediate suture of post-partal cervical tears. If this is not done then all tears where the cervix is deformed, particularly when accompanied by an irritating endo-cervicitis, should be repaired after the child-bearing period. Unfortunately, for the furtherance of accurate knowledge, cancer of the body and cervix are not separated in any actuarial reports. Birth injuries, however, probably have nothing to do with the development of cancer of the body, which is as prevalent among nulliparous women. There is another more remote question in the prophylaxis of cancer of the cervix, and that is, whether a pan-hysterectomy should supersede the supra-vaginal operation in the surgical treatment of fibroids? If the cervix is normal, I think the supra-vaginal operation should still be done, as it is far simpler and less dangerous than the more extensive pan-hysterectomy. If, however, the cervix is deformed or inflamed, it should be removed with the rest of the uterus.

Skin Cancer.—Just a word as to the place of moles in the causation of skin cancers. If removed, they should be removed by a radical surgical operation, going well outside the affected area and well below the true skin. If unmolesed they are innocuous; if treated badly they are exceedingly dangerous. This is particularly true of the pigmented variety. I saw, a few years ago, a very striking example of this axiom. A woman, of 40, had a small mole in front of the ear, which was treated with electrolysis. Six months after this small operation she developed an enlargement of the post-auricular lymph glands, which were excised and proved to be malignant. In spite of radical operation and post-operative radium treatment, the woman died of a brain metastasis. There are enough of such cases on record to make it imperative, that when a lesion of this kind is treated at all, it should be treated by radical operation.

THE TREATMENT OF CHOICE.

The treatment of choice in nearly all forms of cancer remains surgical at the time when the cancer is still operable. This is particularly true of certain forms of cancer in which operative results are unusually successful. In cancer of the breast, before palpable axillary involvement, it is possible that about 60 per cent. of all cases properly operated on can be saved. It should be the dictum in all operations for cancer of the breast, that the earlier the cancer the more radical the operation, because of the greater probability of a cure.

Though it is not within the scope of this paper to discuss operative technique, there are a few simple well-defined rules for operations on cancer of the breast. No breast should be removed unless the axilla is at the same time thoroughly cleaned out, the axillary dissection preceding the removal of the breast. The reason for this is the lessened haemorrhage and the sealing of the lymph channels before the removal of the breast. The axillary dissection should be carried from the apex of the axilla far down below the fold of the arm. Some advise going into the sub-clavicular space, this, however, is of doubtful value, as once the cancer has spread to the sub-clavicular glands, cure is impossible. The incision should be carried, according to the latest views of Handley, below the chest onto the upper aspect of the abdomen, in order to break the chain of lymph channels which there perforate the abdominal fascia. No one incision can be adopted in operations for cancer of the breast, as the incision must of necessity be planned according to the location of the tumor. It is important to remove not only the skin covering the tumor, the breast and axillary glands, but also both pectoral muscles, including the clavicular attachment of the pectoralis major. It is, however, advisable always to make the axillary incision across the axilla and not in its sagittal line, as this insures good abduction of the arm.

During the past few years, with gradual improvement of technique, the operative indications of most forms of cancer have been extended. Whereas formerly in cancer of the stomach, the fewest cases came to operation, and nothing beyond a gastroenterostomy was done, now radical operations are attempted. The reason for this is that the outlook for cancer without operation is so hopeless that at the cost of an increased mortality, the patient should nevertheless be given the chance of a possible cure. As long as these cases do not come to operation in their incipiency, the five-year cures must of course be very few. The operative mortality, however, with the increased experience of a large number of surgeons, has become comparatively low.

In certain forms of cancer of the large intestine, when the diagnosis is made early, the chance for radical cure is excellent, particularly

in those cases above the recto-sigmoid junction, in which a good anastomosis can easily be made. Thus, in spite of the claims of other treatments of cancer, in most instances the treatment of choice remains surgical.

SURGICAL POINTERS.

It is needless to say that everything should be done to improve the general condition of the patient before operation. If there is anaemia, this should be corrected by an adequate transfusion; if the patient is dehydrated, a large amount of water should be given either by mouth, or if this is impossible, by the rectum or subcutaneous method. In addition to this, the patient should be alkalized. In cancer of the stomach and large intestine, if the patient is in too weakened a condition to undergo a major operation, this may very well be done in two stages, as for instance, a gastro-enterostomy preceding a resection of the pylorus or a colotomy preceding a removal of the rectum. The operation should be done with as little shock as possible, and should preferably be done under nitrous oxid-oxygen anaesthesia.

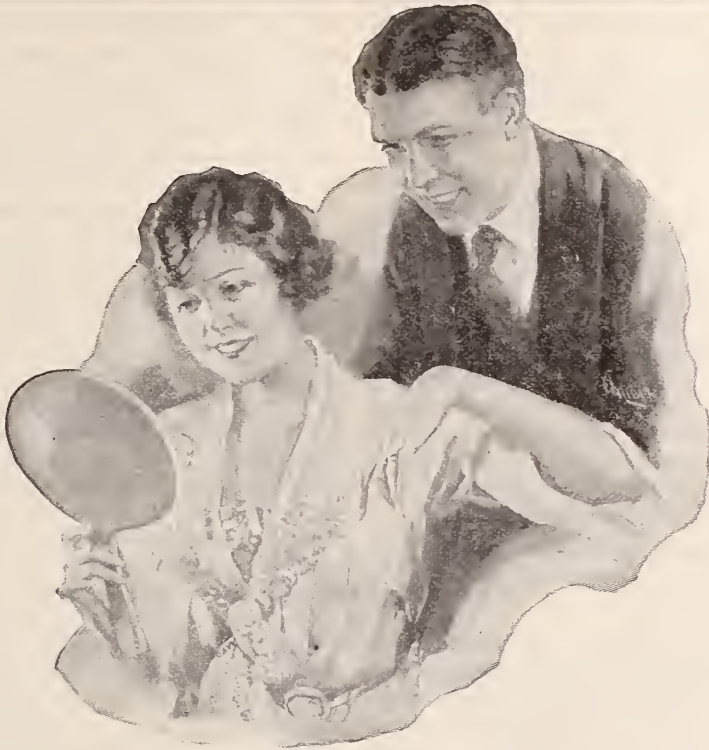
RADIUM AND X-RAY TREATMENT OF CANCER.

Radium and X-ray have a very definite place in the treatment of cancer. There is, I believe, a tendency now to substitute radium for operation in cancer of the cervix, even in the operable stage. This is due to the very large mortality in the Wertheim operation (approximately 19 per cent. in the hands of the best operators), the distressing sequelae and the small number of radical cures. Another distressing feature of the operative treatment of cancer of the cervix is the very small percentage of cases applying for treatment, which are operable.

In a decade Clark operated on 60 patients for cancer of the cervix and estimated that during the same period more than 300 were refused operation, an operability of only 15 per cent.

In Jacobson's collection of 5,027 cases, only 1,720, or a little over 31 per cent. were considered operable. In contradistinction to this radium is available in all classes of cases, and whereas the percentage of five-year cures is not far greater than the Wertheim operation, nevertheless, considering the availability for all classes of cases and the freedom from operative mortality, the results are, in my opinion, better. This same opinion has been voiced by Clark, who says: "If an operation or other therapeutic process is to have a permanent place in our armamentarium it must be sufficiently easy to make it available, not for a few skilled specialists, but for the great body of surgeons working in every quarter of this and other countries."

In a recent discussion before the American Medical Association, Clark definitely stated his viewpoint on radium in cancer of the cervix:



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"In comparing the vast outlay of surgical effort put forth in the latter class of cases with the great dangers attending the radical operation, as to both mortality and disabling results, we feel convinced that the time has about, if not quite, arrived when we shall cease to speak of any operable cases of cancer of the cervix, but shall submit them all to irradiation. Certainly our results have led us very convincingly in this direction. As the palliative results have been so excellent and, as our statistics now appear, the actual cures have been so relatively large in the hopeless cases, it would appear illogical to submit the early, operable case to the great dangers of surgical intervention and reserve only the inoperable cases for irradiation. While we still discuss operability, we are indeed turning to this method of procedure in such a small minority of cases in our clinic as to carry our statistics in this line almost to the vanishing point."

He further states that "radium in 100 mg. amounts will yield most gratifying results if properly applied."

As I said before, this is the only condition, in my opinion, in which radium should supersede operation, except in the very small superficial basal celled carcinoma of the face, in people well advanced in years. These cases can nearly always be cured by the judicious use of radium or X-ray. Radium has, however, a definite place in surgery, as an aid to operation. This is particularly true in cancers of the tongue, floor of the mouth and buccal mucosa. In this class of cases, radium should precede a thorough radical operation, including the dissection of the regional lymph glands, and operation should in turn be followed by extensive radiation. Radium is also of great value in inoperable cancers in accessible situations.

The position of X-ray treatment of cancer is just now in a possible period of change. Heretofore, raying has been used as an addition to surgery, as has radium, in the treatment of inoperable cases. For instance, all cases of cancer of the breast should be given a post-operative radiation. In some clinics it is the custom to treat cancer of the breast pre-operatively, so that, if possible, the cancer cells may be in a state of reduced malignancy when the operation is done, thus hoping to avoid implantation growths. Though this treatment has been followed in most of the clinics of the world, it is still doubtful whether through this endeavor there have been a lessened number of recurrences. In fact, Rehn has tabulated his cases since using radiation and has found that the percentage of recurrences has not been decreased. However, a very large series of cases must be examined over a five-year period to determine whether or not this is true. Accordingly to our best knowledge it is only fair to give the patient the benefit of the doubt, and insist on this post-operative radiation. The same

holds true, in my estimation, after radical operation on other parts of the body, particularly the stomach and intestines where, however, radiation must not be given until healing of the intestinal suture has finally occurred, as there is a possibility of extensive radiation breaking down the new-formed cells in the intestinal union.

DEEP ROENTGEN THERAPY.

Reports have come from Germany and Switzerland of a new X-ray apparatus and treatment, known as deep roentgenotherapy. The machine is designed to allow only the passage of high or peak voltage. There are, of necessity, some softer rays developed, which are filtered out by the proper use of metallic screens. The penetration of the rays can be determined with engineering exactitude so that the total amount of radiation at the surface or any depth can be controlled very minutely. By using different portals of entry, so that the paths of the rays converge on the malignant mass, the tumor can be treated with a sufficient amount of radiation to destroy it, while the superficial parts do not receive a lethal dose.

In various cases of deep-seated malignancy, the patient remains under treatment for hours at a time. Naturally with a treatment of such severity the constitutional effects are severe, resulting in shock and destruction of blood cells, which frequently necessitate a blood transfusion. This class of cases should be hospitalized and the treatment should only be in the hands of the most expertly trained roentgenologists, as otherwise catastrophies are to be expected.

Duane, at the Crocker Institute, is working on a machine of this kind, but thus far has not reported his results. This treatment is still under trial, and it remains to be seen just how much good it will do.

SUMMARY.

To recapitulate: The most important factors in the treatment of cancer remain:

First. The early diagnosis; early enough to allow radical operation.

Second. The treatment of choice in all forms of cancer, except cancer of the cervix and superficial skin cancer remains surgical.

Third. Radium therapy should supersede operation in the treatment of cancer of the cervix.

Fourth. A surgical operation when done should be radical, as partial operation is worse than useless.

Fifth. All our efforts should be concentrated on the education of doctors to appreciate the ravages of cancer, and to be on the lookout for its early symptoms.

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1. Jacobson, quoted by Janeway: Surg., Gynec. & Obst., Sept., 1913.
2. Clark: Jour. A. M. A., Aug. 20, 1921.

TYPHOID EPIDEMIC TEACHES A LESSON IN MILK SUPERVISION

During the week of September 12-19, twenty-four cases of typhoid fever developed in Bowling Green, the county seat of Wood County. From that time to the middle of October the number of cases increased to forty-three and one death occurred. As soon as health Commissioner H. J. Powell began to receive reports he called for assistance from the State Department of Health, which detailed Drs. F. G. Boudreau, R. B. Tate and C. Mahoney to cooperate in investigating the sources and instituting preventive measures.

It developed from investigation that nearly all of the first cases took milk from one dairy, and it was afterwards found that one-fifth of the customers of that dairy developed typhoid fever. Three members of the family owning the dairy suffered prior to the epidemic from an illness simulating typhoid. As soon as these facts were discovered the sale of milk from the affected dairy was stopped and all other dairies supplying milk in Bowling Green were required to steam-sterilize all milk bottles, to cap all bottles with machine cappers and to pasteurize all milk by the holding method.

In the meantime the public water supply was thoroughly investigated and found to be safe. Stringent regulations regarding privy vaults, wells, restaurants and the food supply were adopted and enforced.

While the epidemic was quickly brought under control, it is probable that the lesson taught will not be forgotten but will lead to such close supervision of the milk supply that a recurrence will be rendered impossible.

Enlargement of Student Health Service Recommended

Dr. H. S. Wingert, director of the student public health service at Ohio State University, in his annual report, emphasizes the exceptionally good health of the student body during the past year. Early in October at the time the report was filed, there were no cases of diphtheria among students.

The department treats an average of 83 students a day. A great many of these cases, however, are students who are required to take the vaccination for smallpox. During last year there were 11,000 visits to this department. In order to better handle its increased needs the department has moved its headquarters this year to larger quarters, occupying five rooms.

In his report Dr. Wingert emphasizes the need of an additional physician and an extra nurse. He also advocates very strongly the establishment of an inoculation hospital as no provisions are now made for students suffering from contagious diseases.

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Twenty-four physicians, graduates of medical colleges recognized by the State Medical Board, were granted certificates through reciprocity at the meeting held October 3. The new licentiates, their schools of graduation and intended Ohio locations are as follows:

Warner W. Anderson (colored), Fort Wayne College of Medicine, intended location Cleveland; Jacob O. Hausman, Ensworth Medical College, intended location unknown; Charles T. Lancaster, Cincinnati College of Medicine and Surgery, intended location Akron; Marshall F. Leland, Western Reserve University, intended location Cincinnati; John Isaac Appleby, University of Minnesota, intended location Bellevue; Reed O. Brigham, University of Michigan, intended location Toledo; Kenneth D. Blackfan, Albany Medical College, intended location Cincinnati; Bernard J. Dreiling, St. Louis University, intended location Youngstown; Bertram F. Duckwall, University of Michigan, intended location McArthur; Lee H. Ferguson, Columbia University, intended location Cleveland; Merit D. Haag, University of Michigan, intended location Toledo; Alexander P. Hunt, University of Louisville, intended location Portsmouth; Edgar W. Kaufman, University of Maryland, intended location Youngstown; Isadore J. Mehlman, University of Michigan, intended location Toledo; David H. McCall, University of Louisville, intended location Portsmouth; Laurence Segal, Medico-Chirurgical College, intended location Youngstown; John P. Sharp, Hahnemann Medical College, intended location Niles; Caesar W. Sunseri, Jefferson Medical College, intended location Steubenville; Edward J. Tracy, University of Louisville, intended location Kenton; Edward B. Vogel, St. Louis University, intended location Cleveland; Percy J. McElrath, College of Physicians and Surgeons, intended location Cincinnati; Oscar V. Batson, St. Louis University, intended location Cincinnati; John J. Randall, Albany Medical College, intended location Cleveland; Martin Heydemann, Harvard Medical College, intended location Cleveland.

—The December examinations will be held December 7, 8 and 9, 1921.

—The certificate of Dr. Samuel F. George, Lima, was suspended for a period of three months.

—The hearing in revocation in the case of Dr. Leverne Badger, Toledo, is to be further considered and decided at the meeting January 3, 1922.

—Dr. E. L. Lowthian, Yorkville, charged with sale of narcotics, was reprimanded and his case

continued to the January meeting. He was advised that unless all reports concerning his habits and practice were satisfactory, his certificate would be revoked.

—The State Medical Board directed the secretary to submit to the Attorney General for an opinion the right of the licensed physician to employ assistants, working under his direction and in his immediate presence. Request for the opinion was submitted by the Council of the Ohio State Medical Association.

PROSECUTIONS

—W. G. Hamlin, M.D., not licensed in Ohio, plead guilty to illegal practice of medicine in the Court of Justice Nearing, Bowling Green, September 13, 1921. He was fined \$500.00 and costs, \$475.00 of which was suspended provided he ceased further practice in Ohio.

—Mary Tutak, midwife, Rossford, was fined \$25.00 and costs for illegal practice of medicine.

—Frances Skurzyn, Toledo, plead guilty to illegal practice of medicine and was fined \$25.00 and costs.

—Before Justice of the Peace, Henry Davis, St. Clairsville, Mrs. Antonia Markivitch and Mrs. John Harkovitch were fined \$25.00 and costs each for the illegal practice of midwifery. In the same court Mrs. Elizabeth Callovi Bernardi, licensed midwife, plead guilty to the illegal practice of medicine and was fined \$25.00 and costs.

—Robert T. Jones plead guilty to illegal practice of medicine and was fined \$25.00 and costs by Justice of the Peace Britton of Bridgeport. Rosie Vesmas plead guilty to illegal practice of medicine and was fined \$25.00 and costs by Justice Britton.

—William N. Smith, colored, was convicted of illegal practice of medicine in the Municipal Court, Columbus, and was fined \$100.00 and costs.

—Misree Kahn was convicted of the illegal practice of medicine in the Municipal Court of Cincinnati and fined \$100.00 and costs.

—Sam Dial was convicted of illegal practice of medicine in the Municipal Court of Cincinnati and fined \$200.00 and costs.

—Verona Lubataski was convicted in the Municipal Court of Cleveland for the illegal practice of medicine and fined \$50.00 and costs.

—Vincenza Valbonesi, Cleveland, hastily concluded to return to Sunny Italy after a warrant had been issued for her arrest for the illegal practice of medicine.

—Lila Taylor was arrested by Canton authorities on complaint of Inspector Ludeman, charged with the illegal practice of medicine, October 10.

—N. J. Chakeres was arrested by Springfield authorities on complaint of Inspector Ludeman,

charged with illegal practice of Medicine, October 10.

—Martha Saylor, Tiffin, arrested on complaint of Inspector Ludeman on July 30; withdrew plea of not guilty on August 22nd and was fined \$100.00 and costs by Probate Judge Porter.

—Jacob Michaels, healer, of Forest, who was arrested for illegal practice of medicine on complaint of Inspector Ludeman, was dismissed. Hearing was in the Mayor's Court at Kenton. Some two weeks after the dismissal a patient who had consulted him died a few minutes thereafter on the streets of Forest. Investigation made by the Grand Jury failed to return an indictment for man slaughter. Michael's activities are still being investigated by the Board.

Examination Plan Altered by National Medical Board

The National Board of Medical Examiners now completing its first five years of work, has decided to make a change in its plan of examinations. There has been such a widespread demand by physicians for an opportunity to secure the certificate of the Board that the following program of examinations will be put into effect immediately.

Part 1 will consist of a written examination in the six fundamental medical sciences: Anatomy, including histology and embryology; Physiology; Physiological Chemistry; General Pathology; Bacteriology; Materia Medica and Pharmacology. Part 2 will consist of a written examination in the four following subjects: Medicine including pediatrics; neuropsychiatry, and therapeutics; Surgery, including applied anatomy, surgical pathology and surgical specialties; Obstetrics and Gynecology; Public Health, including hygiene and medical jurisprudence. Part 3 consists of a practical examination in each of the following four subjects: Clinical Medicine, including medical pathology, applied physiology, clinical chemistry, clinical microscopy and dermatology; Clinical Surgery, including applied anatomy, surgical pathology, operative surgery, and the surgical specialties of the diseases of the eye, ear, nose and throat; Obstetrics and Gynecology; Public Health, including sanitary bacteriology and the communicable diseases.

Parts 1 and 2 will be conducted as written examinations in Class A medical schools and Part 3 will be entirely practical and clinical. In order to facilitate the carrying out of part three, subsidiary boards will be appointed in the following cities: Boston, New York, Philadelphia, Minneapolis, Iowa City, San Francisco, Denver, New Orleans, Baltimore, Galveston, Cleveland, St. Louis, Chicago, Washington, D. C., and Nashville, and these boards will function under the direction of the National Board.

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Final 1921 Meeting of State Association Council Held with One Hundred Per Cent. Attendance

MINUTES

Council of the Ohio State Medical Association met in Columbus, October 2, 1921. Those present were: President Teachnor, President-elect Carothers, ex-President Lukens, Councilors Haines, Hussey, Hendershott, Waggoner, Updegraff, Stevenson, McClellan, Brush, Rardin and Goodman; Dr. Upham, chairman of the Committee on Public Policy and Legislation; Treasurer Platter, Dr. E. F. McCampbell, chairman of the Committee on Medical Education; and Executive Secretary Martin. The minutes of the meeting of July 10th were read and approved.

Dr. Carothers reported on preliminary plans for the annual meeting in Cincinnati, May 2, 3 and 4, 1922. He said that arrangements had already been made for holding all sessions under one roof in the Gibson Hotel which has been designated as the official headquarters. He submitted the resignation of Dr. E. O. Smith as general chairman of the local committee on arrangements and recommended the appointment of Dr. Louis Ransohoff to that position. This recommendation was also approved by Dr. Haines, councilor for that district. The appointment of Dr. Ransohoff as general chairman of the committee on arrangements was then officially announced by President Teachnor.

A brief report from the Medical Education Committee showed that eight of the group meetings for the post-graduate study of "Routine Physical Diagnosis" had already been held, with an average attendance of eighty-five, including those held at Xenia, Piqua, Athens, Uhrichsville, Mt. Vernon and Lancaster addressed by Dr. J. H. J. Upham, and those held at Painesville and Bowling Green addressed by Dr. R. K. Updegraff.

Upon recommendation of Dr. Goodman, chairman of the Committee on Auditing and Appropriation, the Council voted to appropriate from the unassigned funds the amount of \$350.00 for postage and telegrams and \$150.00 for stationery, to make up the probable deficit for these items during the remainder of the calendar year.

The secretary of Council, Dr. Goodman, read a communication from Dr. W. E. Lower of Cleveland addressed to Dr. Teachnor, president of the Association, on the subject of anesthesia, and a communication from Dr. Lower to the editor of *The Journal*, accompanied by copy of the same communication addressed to Dr. Teachnor. Upon motion by Dr. Rardin, seconded by Dr. Waggoner, Council voted unanimously to lay these communications on the table.

The matter of certain pamphlets issued by Dr. J. F. Baldwin and the appearance of articles in the newspapers recently was discussed. Upon motion, duly seconded, Council voted unanimously to ignore the whole matter.

Drs. Platter, Upham and Goodman discussed at some length proposed measures for the relief of the present shortage of nurses. Council requested the Committee on Public Policy and Legislation to keep in touch with this situation and report developments from time to time.

Dr. Haines on behalf of a special committee of Council of which he is chairman, recommended the advisability of an enlargement of the executive staff, based on suggestions of ex-President Lukens in his annual address along the lines of a publicity bureau and a field secretary. Dr. Haines stated that his committee was still working on a definite proposal and would report a recommendation for the consideration of Council in the near future.

President Teachnor reported the outcome of a recent conference with State Director of Welfare MacAyeal and suggested that Council approve the Welfare Director's efforts to secure more adequate appropriations from the State Emergency Board for the salaries of physicians employed as assistant superintendents of state institutions. Upon motion of Dr. Carothers, seconded by Dr. Stevenson, Council directed Dr. Teachnor to communicate to Dr. MacAyeal the position and sentiment of Council on this matter.

Dr. Hussey submitted the following proposed communication for adoption by Council and transmission to the State Board of Medical Registration:

"TO THE STATE BOARD OF EXAMINATION AND REGISTRATION:

"The Council of the Ohio State Medical Association having in mind the best interest and being desirous of promoting unity and harmony in the profession, requests your department to submit to the Attorney General of Ohio for formal decision the following question, as we are of the belief that neither faction, proponents or opponents of the question, clearly understand the legal status of the matter. We believe that a decision on these points would definitely settle the question and stop the agitation between the members which in some instances has reached an unpleasant attitude toward each other.

"Physicians in the conduct of business have frequent need of the services of assistants, both voluntary and paid. The Attorney General of Ohio has unofficially said that laboratory technicians, in some instances non-medical men, who make reports to physicians and surgeons on pathological specimens and make frequent microscopical examinations of various kinds; attendants in physicians' offices who prepare patients and make surgical dressings; X-ray assistants; operating room nurses; hospital ex-

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ternes and internes who are under-graduate; nurses in charge of private patients who administer drugs and apply dressings, and other persons who voluntarily assist the physician or surgeon and who act under the physician or surgeon's direction; are legal and come under the construction of the Medical Practice Act of Ohio.

"With the facts before you and with the understanding that such services as outlined above are legal and for which a licensed physician is responsible, we would inquire whether, in the absence of any statute whatever, the administration of an anesthetic by a nurse, for which she is paid, or other licensed individual, is prohibited provided such anesthetic is administered in the immediate presence and under the direction of a licensed physician. In other words, if the activities outlined above are chargeable to the licensed physician and the unlicensed members of his staff are held to be his agents, does not the same rule apply in the case of the administration of an anesthetic under the same circumstances?

"Should it be held that all of the activities outlined above are legal, provided they are performed in the presence and under the direction of a licensed physician or surgeon, is there any need of the present law legalizing the administration of anesthetics by registered nurses? Would the repeal of this law in any way affect their status?"

Upon motion by Dr. Haines, seconded by Dr. Goodman, the foregoing communication was adopted and authorized for transmission.

Executive Secretary Martin submitted a communication from Dr. Craig, secretary of the American Medical Association, in reference to a conference of state secretaries in Chicago in November, and requested suggestions from Council for topics for consideration at that time. Upon motion of Dr. Goodman, seconded by Dr. Stevenson, the Executive Secretary was instructed to attend the conference and authorization was given for the payment of expenses.

A general discussion participated in by various

members of Council dealt with the subjects of medical economics and the attitude of various organizations and groups on political issues. Emphasis was placed on the necessity of a strong and harmonious medical association with special reference to an increase in membership wherever possible.

A report by the Executive Secretary showed a total enrollment of members in the State Association of 4,852, exceeding by 150 the number on the same date last year and setting a record in numbers of members in the organization.

A brief report on medical defense activities showed that on January 1, 1921, general counsel for the Association were conducting defense in six alleged malpractice actions, of which two have since been terminated. Since January 1st, 13 additional suits and four threats of suit have been referred to the Association. Of the 13 suits, defense in five is being conducted by the Association; defense in six is being handled by private indemnity companies with the cooperation of the Association; and defense in two was withheld because of lapse of membership dues.

Following this report there was a general discussion on the possibility of increasing the insurance to include indemnity and perhaps automobile insurance. Upon motion of Dr. Goodman, seconded by Dr. Haines, the president was requested to appoint a special committee of three members from Council to investigate the possibilities of such an extension in insurance service. To membership on this committee Dr. Teachnor appointed Drs. Stevenson, chairman; Hussey and Hendershott.

On motion of Dr. Goodman, Council adjourned to meet on Sunday, January 8, 1922.

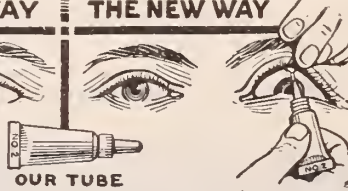
U. S. Public Health Service Institute in Cleveland

During the week of February 27-March 4, Cleveland will be the site of one of a series of institutes which the United States Public Health Service will conduct throughout the coming winter and spring in the larger, widely scattered

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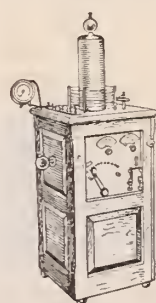
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cities of the United States. The series will take the place of the large institute held in Washington last year.

The institutes are planned to run for a week and this length has been generally adopted. The basic courses include from three to six lectures on tuberculosis, child hygiene, nutrition, clinics, and health centers, communicable diseases, non-communicable diseases, industrial hygiene, sanitary engineering, administrative problems, mental hygiene, medical social work, syphilis, gonorrhea, protective social work; and the delinquent. Single lectures will also be given on special occasions. Two institutes, those at Hot Springs and Chicago, will be devoted especially to venereal diseases.

Lecturers who will speak at the gatherings are prominent in their particular lines, among them being Frederick R. Green, John H. Stokes, A. J. McLaughlin, William C. White, Valeria Parker, W. F. Shaw, W. A. Evans and M. J. Rosenau.

Cities included in the itinerary are New Orleans; Columbia, South Carolina; Dallas, Texas; Birmingham, Alabama; Memphis, Tennessee; Louisville; Indianapolis; Pittsburgh; Cleveland; Lansing, Michigan; Chicago; Minneapolis; Portland, Oregon; Kansas City; Spokane, Washington; Newark, New Jersey; Helena, Montana; Albany, New York; Denver, and Washington, D. C.

Small Advertisements

Wanted—To correspond with physicians interested in touring Europe during the Spring of 1922, for the purpose of study and travel. Hospitals of Paris, Rome and Bern will be visited with a post-graduate course at London and Edinburgh. F. Young, M. D., Center and State Sts., Marion, Ohio.

Wanted—Good doctor—dairy farming—Minnesota town. Write Dent Commercial Club, Dent, Minnesota.

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DEATHS IN OHIO

Walter Bennett Cory, M. D., University of Illinois, College of Medicine, Chicago, 1901; died at his home in Cleveland, September 23, from heart disease. Dr. Cory was general medical examiner for the Brotherhood of Locomotive Firemen and Enginemen.

John C. Gill, M. D., Western Reserve University School of Medicine, 1860; aged 83; died at the home of his son, Dr. William C. Gill, Cleveland, September 20. Dr. Gill served as a regimental surgeon in the Civil War, after which he practiced in Cleveland until his retirement in 1901.

William J. Jones, M. D., Medical College of Ohio, Cincinnati, 1873; aged 80; died at his home in Columbus, September 28, from cerebral hemorrhage. Before retiring ten years ago Dr. Jones had practiced medicine in Columbus for more than 20 years. He was a Civil War veteran. Surviving are three sons, all dentists, and one daughter.

Waldo B. Merriman, M. D., Long Island College Hospital, Brooklyn, 1878; aged 65; died at Grant Hospital, Columbus, September 14, following an operation. Dr. Merriman's home was at Centerburg, where he practiced his profession for

40 years. He leaves a widow and one daughter.

A. Clarence Musgrave, M. D., Eclectic Medical College, Cincinnati, 1897; aged 47; former member of the Ohio State Medical Association; died at St. Vincent's Hospital, Toledo, October 4, following operations for appendicitis and ulcer of the duodenum. Dr. Musgrave had been a resident of Toledo for a year, and prior to that had had practiced medicine for 10 years in Ohio City. He was also a dentist and was engaged in that profession for 15 years. During the recent war he served in the dental corps overseas. Surviving are his widow, one son and one daughter.

Lester Cross Pratt, M. D., Jefferson Medical College of Philadelphia, 1882; aged 61; member of the Ohio State Medical Association and Fellow of the American Medical Association; died in Mary Rutan Hospital, Bellefontaine, September 18, from obstruction of the gall bladder. Dr. Pratt was a native of Logan County and with the exception of one year in Columbus, spent his entirely medical career of 38 years in Bellefontaine. Dr. Pratt was a charter member of the Logan County Medical Society. The son of a physician, Dr. Pratt leaves in addition to his widow and one daughter, three sons who are Drs. Robert and Malcolm Pratt of Bellefontaine, and Dr. Lester Pratt of San Domingo, West Indies.

Joseph H. Peck, M. D., Western Reserve University School of Medicine, Cleveland, 1883; aged 80; died at his winter home in Fort Orange,

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Florida, September 2. Dr. Peck, who was also a pharmacist, made his Ohio home in Cleveland.

Benson E. Sager, M. D., Western Reserve University School of Medicine, Cleveland, 1892; aged 61; member of the Ohio State Medical Association and Fellow of the American Medical Association; died in Cleveland, September 26.

Orville C. Walker, M. D., Cleveland College of Physicians and Surgeons, 1913; aged 33; member of the Ohio State Medical Association; died at his home in Alliance, September 28, from bullet wounds inflicted by an unknown assailant. Dr. Walker was preparing to leave his garage in response to a supposedly urgent sick call when fired upon. He formerly practiced at Cleveland and Salineville. His widow and one small son survive.

Cincinnati Health Exposition

The Cincinnati Health Exposition held in Music Hall, October 15-22, was recognized as the largest undertaking of its kind that has ever been staged in this part of the country and one of the largest in the country. The purpose of the exhibit was to show the health progress made in the Ohio valley and to demonstrate means by which persons may find and retain health.

A combination of one hundred organizations, including the Cincinnati Academy of Medicine and the public health federation, worked hand in hand with the state and local health departments, manufacturers, merchants, etc., to make the exposition a success. More than 100 national, state and city health, recreational, sanitation and safety organizations made exhibits at the exposition in addition to 150 commercial firms whose products have been recognized as having a definite educational feature or relation to the promotion of better health. Among these, the exhibition of two grams of radium worth over \$250,000 and representing one-seventieth of the world's total supply of radium, was of particular interest.

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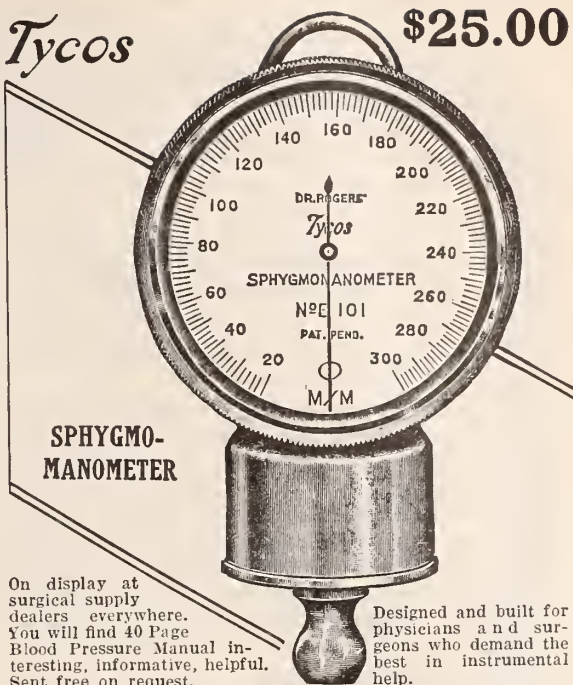


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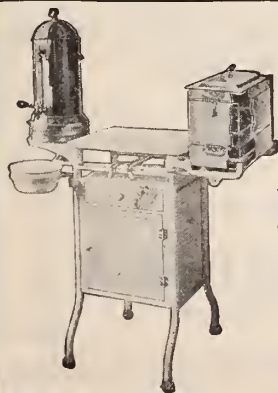
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Health Fortnight to Mark Semi-Centennial of A. P. H. A.

Many Ohioans are planning to attend the fiftieth annual meeting of the American Public Health Association in New York City this month. In connection with this event there will be a "Health Fortnight" including three major divisions—a Health Institute from November 8-11; a Health Exposition, November 14-19; the fiftieth annual meeting of the American Public Health Association, November 14-19. Representatives from virtually every State in the Union and from many foreign countries will participate in the extensive program.

The scientific sessions of the convention proper will be held at the Astor Hotel. The scope of the meetings is indicated by their division into the following: General Sessions, Public Health Administration, Child Hygiene, Public Health Publicity and Education, Laboratory Section, Vital Statistics Section, Industrial Hygiene Section, and Food and Drug Sections. Speakers before these sections will include health workers of wide repute.

It is interesting to note that while the Public Health Association is celebrating its semi-centennial, its founder, Dr. Stephen Smith, is on the verge of marking his own centennial. In his 99th year Dr. Smith is still active and will participate in the meeting.

Public Health Service Examinations

Examinations of candidates for entrance into the regular corps of the U. S. Public Health Service will be held November 14, at Washington, D. C., Chicago and San Francisco. Candidates must be between 22 and 32 years of age, and graduates of a reputable medical school. They must pass satisfactorily oral, written and clinical tests before a board of medical officers. Successful candidates will be recommended for appointment by the President with the advice and consent of the Senate. Requests for information or permission to take this examination should be addressed to the Surgeon General, U. S. Public Health Service, Washington, D. C.

Occupational Disease Rules Adopted

On October 17th the Industrial Commission formally adopted rules and regulations governing the procedure in occupational disease claims against the state insurance fund. Action was taken too late to permit of analysis of the rules in this issue, but this will be done in the near future. Copies of the rules and blank forms for establishing cases will also be sent by the Commission to each physician in the state.

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Third Clinic in Middletown Speaks Well for Progress of Trachoma Prevention

The third trachoma clinic in as many years was held in Middletown September 26 and 27, by state and local health departments. As on the two former occasions Surgeon John McMullen of the United States Public Health Service was in charge. At the first and second clinics 125 cases were operated. A large number of these returned for examination and all were found to be in good condition.

Before the present clinic the nurses and physicians of the Middletown health department made a thorough survey of all school children and picked out for the clinic all who were suffering from inflammation of the eyelids, without regard to severity. One hundred seventy-two individuals came to the clinic and of these only fifteen were found to have trachoma or suspected trachoma. There were 92 with various forms of conjunctivitis and these were given appropriate treatment or referred to their physicians. In 65 cases the eyelids have become normal since the survey was made and these were dismissed. Of the 15 positive or suspected cases, 13 were operated, 11 under local and two under general anesthetics. These cases will be followed up and given after-treatment by local ophthalmologists.

Arrangements for the clinic were in charge of Dr. G. D. Lummis, health commissioner of Middletown, and his staff of nurses. The local chapter of the Red Cross cooperated generously. Representatives from the State Department of Health included Director of Health Harry H. Snively; Assistant Director James E. Bauman; Dr. F. G. Boudreau, chief of the Division of Communicable Diseases; and Mrs. Zoe McCaleb, public health nurse. Dr. Robert Lockhart, health commissioner of Cuyahoga and formerly in charge of trachoma work for the State Department of Health, assisted Surgeon McMullen.

Visiting health commissioners and officials included Dr. Edward Blair of Warren County; Dr. K. R. Teachnor of Butler County; Dr. C. A. Neal of Hamilton County, and Mr. R. G. Paterson, secretary of the Ohio Public Health Association. Public health nurses from neighboring health districts were also present, besides a good representation of local physicians and a number from Franklin, Hamilton and surrounding villages.

Dr. McMullen declared that the clinic showed the work of preventing trachoma in Middletown to have been well done, and that little effort was needed to completely eradicate the disease. The superintendent and teachers of the Middletown schools gave the health officials every possible assistance in this work.

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A more adequate and rapid immunity is established with polyvalent vaccines than from an infection itself. SHERMAN'S POLYVALENT VACCINES WHEN GIVEN EARLY IN RESPIRATORY INFECTIONS, rapidly stimulate the metabolism and defense of the body with a resultant prompt recovery.

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(Send 3-5 cc. of blood)

On every blood I use two antigens and run two tests; the regular method and the latest and best, the ice box method which is especially valuable when testing for cure, and in cases giving doubtful reactions. This insures an accurate report.

Gonorrhea Complement Fixation Test.....\$5.00
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This serologic test is the very best means of determining the presence or absence (cure) of systemic Gonorrheal infection.

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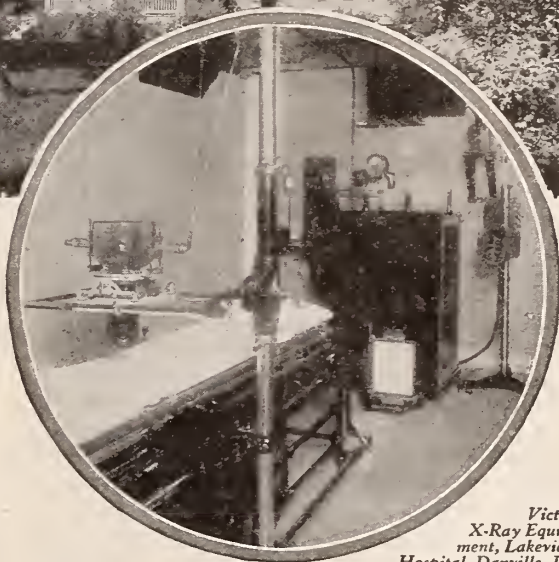
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its facilities, its accumulated electrical and physical knowledge, its wide experience in manufacturing and installing X-Ray apparatus at the disposal of physicians and surgeons. Through its Service Stations it gives the practitioner all the technical guidance that can be legitimately extended.

Victor Service also includes the publication of a periodical called "Service Suggestions" in which X-Ray progress is recorded. Although published primarily for the benefit of Victor clients, it will be sent to physicians who wish to learn of the advances that are made from time to time in radiography. There is no charge for "Service Suggestions."

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HOSPITAL NOTES

—Orchard Springs Sanitarium, located north of Dayton, has a new modern wing which will increase the patient capacity about 30 per cent. Dr. A. F. Shepherd, Dayton, is president of the company, and George V. Sheridan, Springfield, is secretary and managing director. Dr. F. R. Lord is resident medical director.

—At the petition of over 300 Fulton County citizens, a bond issue of \$75,000 will be placed before voters this month by the county commissioners for the erection of a county memorial hospital.

—A lecture course on public health and social service is part of the revised program for the training of nurses at the Cincinnati Jewish Hospital this year. Some of the lecturers and their topics are: Dr. Otto P. Geier, "The Relation of Industry to Health;" Bleeker Marquette, "The Relation of Housing to Health;" Dr. Oscar Craven, "The Meaning of Preventive Medicine;" Dr. J. L. Tuechter, "Tuberculosis Problem;" E. F. Van Buskirk, "The Social Hygiene Program;" Dr. H. B. Weiss, "The Hospital and Dispensary;" V. Lotta Lorimer, "The Visiting Nurses' Association;" Miss Louise Kuck, "Tuberculosis Public Health Nursing;" Judge C. W. Hoffman, "Problems of the Juvenile Court;" Dr. V. V. Anderson, "The Program of the National Committee for Mental Hygiene;" Dr. Louis Lurie, "The Subnormal Child as Studied at the Psychopathic Institute;" Dr. Victor Greenebaum, "The Child Hygiene Program in Cincinnati;" Mrs. Ada S. Stokes, "Infant Welfare;" Dr. Albert Freiberg, "The Social Program for the Crippled Child."

—Trustees of Springfield City Hospital, after careful consideration of the city's financial condition and the industrial situation, have withdrawn their request for the submission at the coming election of an issue of \$300,000 worth of bonds for extensions and improvements. There is realization of the pressing need of increased hospital facilities at the hospital and an effort will be made to do as much as possible with the \$112,000 fund now available.

—Dr. Stephen A. Douglass of Mansfield has assumed his duties as director of the new tubercular unit of the National Military Home, Dayton. Dr. Douglass was formerly superintendent of the Ohio State Tuberculosis Sanatorium at Mt. Vernon and served during the war as a member of the American Tuberculosis Commission to Italy.

—Medical attention and special education for those who cannot attend school will be available to crippled children in a ward recently opened at St. Vincent's Hospital, Toledo. The department, with accommodations for 22 patients, has isolation rooms, a play room and an educational room.

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Write for booklet and prices.

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With 6 inch silvered dial.
A distinct advance over the pocket type.
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Endorsed by the medical profession, who for over a third of a century have proven its reliability in the feeding of infants, nursing mothers, convalescents, and the aged.

Samples prepaid upon request.

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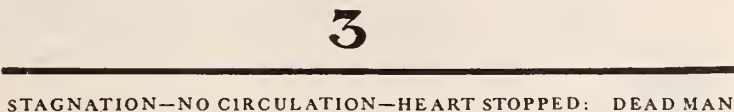
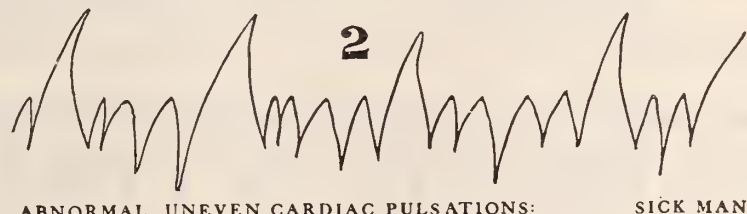
Racine, Wisconsin

The True Significance Bloodpressure

THE True Significance of Bloodpressure lies in those small but gradual bodily changes that are frequently ignored as inconsequential. Diagnosis on a patient dying of apoplexy or a case of pernicious anemia has no preventive value. What makes bloodpressure an invaluable factor in diagnosis is, that it is the all-embracing index by which permanent, bodily changes may be recognized—then dealt with even before they manifest themselves in symptoms of pain or put their mark on the physical structure of the patient. In many cases the patient who is “suddenly” stricken has in fact been months or years working toward this climax.

The Thermometer indicates transient changes induced by disease. Pains, swellings, inflammation are temporary symptoms which disappear with returning health. But Bloodpressure marks the actual wear and tear on bodily organs and provides a definite measure of their waning

power. Write for our latest literature on the Baumanometer in which the simple, world-old principle of gravitation is used to obtain accuracy and dependability in all bloodpressure readings. It is perpetually guaranteed.



Every point between normal, rhythmic heart-action and its forced increase or slowly diminishing power has a bearing on your patient's case. Determine for yourself what they mean:

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In this latter effort you will find an ever ready, loyal assistant in your

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A ROUTINE TEST

RENAL FUNCTIONAL
DETERMINATION WITH

Phenolsulphonephthalein, H. W. & D.

The sterile mono-sodium salt solution in ampules, one c. c. each.

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The sodium salt of
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RELATIVE infrequency of reaction, rapid disappearance of contagious lesions, and general therapeutic effectiveness seem to indicate that Silver-Salvarsan is a drug of real value in the treatment of syphilis.

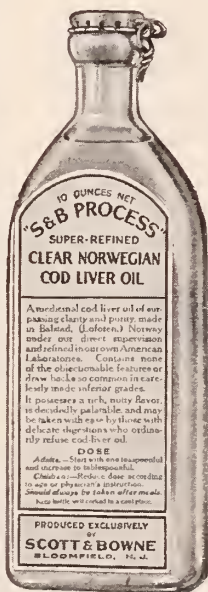
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More than two million injections of Silver-Salvarsan have been given in the United States and abroad.

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SUPREME IN ITS FIELD

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The "S. & B. PROCESS"

Clear Norwegian (Lofoten) Cod-liver Oil

meets the need for an easily absorbed, *anti-rachitic nutrient* in the best possible manner.

When you prescribe the "S. & B. Process" you know that your patient will absorb 100% pure oil of the *True Gadus Morrhuae*.

Liberal samples to physicians on request.

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FOR hemophillia and all cases of hemorrhage where mechanical interference is not indicated.

A true physiologic hemostatic, prepared from ox-brain tissue in accordance with the methods of Dr. Alfred F. Hess, Research Laboratory, N. Y. City Department of Health, and containing the principles of both blood and tissue upon which normal blood clotting depend.

The work of Hess has confirmed the findings of Howell and of Hirschfelder and has thoroughly demonstrated the value of the lipoid substances of brain extract in controlling hemorrhage.

Reports from unbiased observers give the clotting-accelerator value of Thromboplastin Squibb as from three to seven times that of hemostatic serum and other physiological hemostatics.

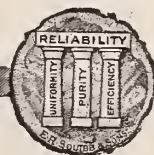
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Indicated in all types of hemorrhage from small blood vessels and in cases of surgical bleeding where ligation is unnecessary.

Especially valuable in controlling hemorrhage after removal of adenoids and other nose, throat and oral surgery.

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MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858.

Strength and Pliability are Found in *Armour* Iodized Sheep Gut Ligatures

which are made from lamb's gut selected in our abattoirs especially for surgical purposes.

The Armour Iodized Ligatures possess full tensile strength and their pliability prevents breakage at the knot. They are iodized to the core and are absolutely sterile. Regular lengths, sizes 00 to number 4 at \$2.50 per dozen.

We also offer Plain and Chromic Ligatures, sizes 000 to number 4 regular lengths \$2.50 per dozen, emergency lengths, \$1.50 per dozen (nothing but the smooth side of the intestines is used in the manufacture of the Armour ligatures).



Suprarenalin Solution, 1:1000 is stable, uniform and free from preservatives.

Pituitary Liquid is physiologically standardized and is ready for hypodermatic use— $\frac{1}{2}$ c. c. ampoules for obstetrical and 1 c. c. ampoules for surgical use.

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The Rocky Glen Sanatorium A private institution for the treatment of Pulmonary and Laryngeal Tuberculosis

McCONNELLSVILLE, OHIO

The sanatorium is located at McConnellsville, Ohio (a town of 3000) upon a beautiful high hill, with picturesque surroundings, and a pleasant environment. It is built on the cottage plan, (each patient having either an individual cottage or a cottage with a sleeping porch for two) and equipped for the scientific diagnosis and treatment of pulmonary and laryngeal tuberculosis.

The cottages have all modern conveniences, such as individual call bells, hot and cold running water in each cottage, electric lights, and a very adequate supply of furniture.

Climate means nothing in the treatment of pulmonary tuberculosis, so why send your patients west? The climate in Ohio is as good as any. The cardinal points of REST, FRESH AIR, PROPER FOOD, AND REGULATED EXERCISE is the method of treatment used.

CLOSE PERSONAL ATTENTION IS THE MOTTO OF THE INSTITUTION.

Success in the treatment depends upon the stage of the disease at which the patient is admitted to the institution. The sanatorium acts as a "school" where patients are taught to live properly and to protect others. They also learn the value of rest. By giving your patient a short period of "schooling" he will be better prepared to follow instructions and will have increased his chances of arrestment of his disease.

When in doubt as to diagnosis, we will admit the case for observation and report.

COMPLETE X-RAY DEPARTMENT AND LABORATORY.

ARTIFICIAL PNEUMOTHORAX TREATMENT AND TUBERCULIN WHEN INDICATED.

RATES, \$28.00 per week, which includes everything except an X-ray examination, which is made on admission.

Descriptive circular and other information on request.

Inquire of

DR. EMMET FAYEN, Medical Director, Rocky Glen Sanatorium, McConnellsville, Ohio

MEDICAL ECONOMICS

PUBLIC HEALTH - SOCIAL WELFARE *and* ORGANIZATION PROBLEMS WITH EDITORIAL COMMENT *by* D. K. M.

A Timely Message.

Editor's Note.—*The Journal* is glad of the opportunity to convey to you from President Teachnor the following communication which should be a source of inspiration and mutual helpfulness.

Fellow Members, Ohio State Medical Association:

As the end of 1921 approaches it seems to me timely that as president of the Ohio State Medical Association, I should express to you, the members of the local societies and academies of medicine, appreciation for your interest and cooperation in medical organization achievements. Our accomplishments, frequently setting examples for similar organizations elsewhere in America, have been possible solely because of the strong local units which in turn centralized through the State Association, has constituted the point of contact not only with governmental functions, but with other local, state-wide and national organizations interested in similar problems.

The time is at hand when, while having in mind that our profession must hold as paramount the best interest of the public, medical organization shall lead the way in all questions of health and medical service through cordial cooperation with civic, welfare and social organizations which are naturally though incidentally interested in various phases of these problems.

Education of whole communities and the public at large with a change in habit of thought and a new attitude toward disease and toward medical service are essential conditions to progress. This is not only our duty, but should be our privilege. Just as medical organization in order to speak forcefully and effectively for the profession must be based on a firm and substantial foundation, local members through their interest in civic and political affairs must have a guiding hand over all local welfare and health agencies, in contact with all groups—political, civic and even religious. So must the state organization with its program of activities representing the sentiment and best thought of the entire profession, wield its just influence in a state and national way.

By an increased membership including every eligible physician in each county society, each member will benefit in geometrical ratio by this added influence and the status of the organiza-

tion thus enabling the Association to proceed as a forceful unit in all matters of common interest.

The State Association has fulfilled its function as a medium of service to the physicians individually and collectively, but the mechanics of organization must constantly be increased and enlarged. A committee from the Council of the State Association is now preparing recommendations for further expansion of organization benefits and service to the members. These activities must necessarily be contingent not only on continued cooperation by present members, but by the inclusion of all those eligible to membership.

It should be unnecessary in this day of advancement with the complication of economic, political and social problems to enumerate the benefits and advantages, even the necessity of medical organization. As has been said, *The Journal* is the keystone of the organization arch. It is the official medium of expression and the chief means for disseminating information to the membership. Complete files of *The Journal* should be kept by each member; it constitutes from month to month a consecutive record of innumerable subjects of direct interest to each physician.

The public judges a physician very largely by the esteem and respect of his fellow practitioners. Organization raises the tone and standard of the physician. In each community progressive, forward-looking physicians are active members of their local society. The influence of the physicians who have established themselves in the community carry weight with the young physicians who in turn cannot afford to remain aloof from the organization. The state in its attitude toward an individual physician always takes into account his status in his local medical society. Even legal standing is contingent on such position as evidenced in cases of reciprocity between various states, and in expert testimony in medico-legal cases.

We all realize the persuasive power of the physicians of Ohio on legislative policies, on matters affecting health, sanitation and kindred problems. Completely organized this influence would be almost absolute.

It is timely that the members be reminded that membership dues for 1922 must be paid in advance in order to retain good standing for purposes of medical defense and all other organiza-

tion benefits; that with the approach of the annual election in most county societies and academies of medicine, that the perpetuation of organization depends on a careful selection of elective leaders, other officers and committees.

Please remember that this is your Association, for your benefit and service; that the officers not only appreciate your cooperation but your suggestions for further mutual advancement.

Wells Teachnor, M.D., President.

Health and Medical Legislation

Of the approximately 12,000 bills and resolutions introduced in the present Congress from the time the special session convened on April 11 of this year to the present time, no less than 140 bills have been under consideration dealing with public health, medical practice and licensure.

If the mass of radical and wierd proposals now pending in Washington is any indication, the various state legislatures, including that of Ohio, before many months will be confronted by many destructive suggestions in which the medical profession is vitally concerned.

Among the most important of the federal proposals are those dealing with a department of public welfare, and the Sheppard-Towner maternity bill, already passed in the Senate and recently recommended for early action in the House by the Committee on Interstate Commerce in the lower branch.

Many newspapers in their sentimental appeal to the masses and with little if any understanding of the purpose and without regard for results of such legislation, are proclaiming editorially that the Sheppard-Towner bill is a "practical measure," that it "advocates nothing experimental" and that it will be a boon to the mothers and babies of America.

Also of considerable significance is the women's "bill of rights" proposed for enactment by the federal and state governments to remove all legal discrimination against women.

Women would have the right upon marriage to choose their names and have equal voice to custody of their children, legitimate or illegitimate, under the proposed new bill of the women's organization.

Other legal rights for women proposed include: suffrage; eligibility to all offices, freedom of contract; choice of domicile, residence or name; acquisition and control of property; control of labor and earnings; eligibility to fiduciary positions; equality in grounds for divorce; immunities and penalties for sex offenses. All common law disabilities of women would be abrogated under the legislation.

Legislators urged by organized groups, many of which may be characterized as "fanatical minorities," continue to propose all sorts of measures. Indeed the present year has brought forth the enactment by the legislature in fifteen of the

Central-Western States, including Ohio, a total of 5,368 new laws confusing to the public and consequently a source of revenue to the lawyers.

The cults have been busy in Washington, as proved by bills now pending on chiropractic, optometry, vivisection and the like. These measures call forth a number of perfectly natural questions. In the words of one physician:

"Why this everlasting hammering at the medical profession? Is it that the profession, as a profession, has failed to make good? Or is it due to the indifference of the profession, as a profession, to the affairs of state and the duties of citizenship?"

"Now what are we as a profession going to do about all of this? Are we going to sit tight and let the kind of men we send to our legislatures legislate us out of business, out of the most learned profession in the world? Or will we have the 'guts' to oppose such matters in the only way that will be effective."

The first part of the answer is obvious—harmony, unity and cooperation by the profession through organization.

"Cart Before the Horse"

In many ways this appears to be the "age of buncombe." There are too many panaceae for all sorts of social and economic ills. The tendency toward experimentation with radicalism is indicated not only in measures pending and proposed in Federal Congress and the various state general assemblies, but in the program of activity of numerous welfare agencies. The idea of fetish seems to fill the minds of large masses. Too often proposals garbed in the habiliments of philanthropy interwoven with the idea of health promotion and social improvement have received the support of the well-intentioned but poorly informed.

Too often medical organizations in the past have failed to exert their natural leadership in these matters in which the physicians through training and experience, are in best position to determine the fallacy of the plausibility of the variety of proposals.

The public is naturally interested in general problems of health, welfare and social responsibility, and it is quite time that the medical profession, through its organizations take the leadership and point the way toward a sound, practical solution rather than to be swept along or led into emotional proposals not based on facts, experience and sound reason. A constructive, though conservative program must be formulated and followed.

Above all, let's avoid becoming unconscious or unwilling champions of new schemes *just because they are new*.

Several of these thoughts are expressed in an interesting way by Dr. Edward H. Ochsner of Chicago, whose recent address on Medical Eco-

nomics before the Chicago Medical Society, is reproduced in part on page 849 of this issue.

Whether or not one agrees with his reasoning, many will agree with his conclusion that the activity of medical men can be classified into three general functions: First, sanitation and public hygiene; second, the teaching of personal hygiene, and thirdly, the treatment of disease and human ailments. His conclusion is that the first is distinctly the function of the state, and the last distinctly the function of the private practitioner of medicine.

Cincinnati Health Exposition.

That the Cincinnati Health Exposition held in that city for an entire week the latter part of October was "the most human, appealing and understandable exhibit of the kind yet held" as expressed by Secretary Owen R. Lovejoy of the National Child Labor Committee, apparently voices the thought of a large majority of the 160,000 persons who attended the exposition during that week.

Outstanding among the striking educational exhibits were those of the College of Medicine, University of Cincinnati, Cincinnati Board of Health, Academy of Medicine of Cincinnati, Association of Industrial Physicians, American Red Cross, Cincinnati and Hamilton Chapter, Anti-Tuberculosis League, Council of Social Agencies, the Public Health Federation, and the joint exhibit of hospitals.

"We used to think of health as a football game, which we watched from the bleachers, and permitted the professional players, the doctors, nurses, pharmacists and undertakers to be the whole show. Now we all are realizing that we must take a part in the game. A man who dies 15 or 20 years before his time commits a crime against his community in that he robs it of so many years of service. It is up to our public-spirited women to foster these forward movements in education and health," said Mr. Lovejoy in speaking of the exhibit.

Many active members of the Cincinnati Academy of Medicine served on the various committees for the exposition and contributed largely to its success. As a feature of the exposition, lectures on various phases of public health problems were delivered by prominent authorities from throughout the country.

The medical profession in Cincinnati is to be congratulated for its part in this extensive educational campaign which through visualization and demonstration carried a forceful message direct to the public on hygiene, sanitation, sickness prevention and the broad field of scientific medical service both in the home and in the hospital.

Narcotic Drug Regulations.

The Commissioner of Internal Revenue has issued under date of October 19, 1921, new regulations for the enforcement of the Harrison narcotic law. These rules permit a physician, acting in accordance with proper medical practice, to prescribe or dispense narcotics for the relief of acute pain or for any acute condition. This may be done without reference to the question of drug addiction. Narcotics may also be prescribed for treatment of incurable diseases, provided (1) the patients are personally attended by the physician, (2) that he regulate the dosage, and (3) that he prescribe no quantity greater than that ordinarily recommended by members of his profession to be sufficient for proper treatment of a given case. Mere drug addiction is not considered as an incurable disease, but those suffering from infirmity or old age, who are confirmed addicts of years' standing and who, in the opinion of the physician, require a minimum amount of narcotics to sustain life may be considered in the incurable class. Ordinarily addicts must be treated in accordance with the usual experience of the medical profession. The drug must not be placed in the addict's possession, nor the treatment extend over thirty days for a patient not confined in a proper institution. Additional information on the new rules will be found on page 851.

Distribution of Medical Service

Advertisements recently appearing in city papers in Ohio urging that a doctor locate in a certain rural community, isolated from medical service at present, again calls attention to the problem of the shortage of physicians in some rural communities as compared to the possible "over-service" in some of the cities.

Perhaps a serious situation with no resident physician in some of the smaller towns and sparsely settled communities may eventually bring home to the residents of those places the necessity for proper recognition and adequate remuneration for such vital and necessary service.

That the time has passed when the recovered patient can expect to pay his doctor in "beans and cabbages" if at all, is cleverly emphasized in a recent editorial in the *Tiffin Advertiser*, which arrives at the logical conclusion that every community must awaken to the fact that the physician is its most important member. Because of the quaint though true way in which this thought is expressed, the editorial is here reproduced:

"A village in a neighboring county, being without a doctor, is advertising for one. There probably is some good reason for such a situation. It may be that the community must be so healthy that even imaginary ills do not prevail. Possibly there is no welcome sign out for the stork, or again it may be that the community has acquired the habit of expecting the doctor to take

his fee in beans and cabbage, obvious to the fact that he and his family occasionally enjoy a change of diet and for the wherewithall with which to replenish their raiment. In short it is possible that the community does not support a doctor and thus has itself only to blame. The village doctor is among the most faithful and unselfish members of society. His work largely is a sacrifice of time and talents to the wants of a small community which frequently does not appreciate him until he has gone and there is nobody ready to take his place. He it is who receives the most intimate secrets and confidences of the people among whom he labors and keeps them inviolate. He ushers into the world the babies and helps them over the numerous vicissitudes of chickenpox and measles. He eases the last hours of the aged and is a never failing refuge when the occasional hour of emergency comes. When the dark specter of epidemic swoops down he arises to the emergency and his ministrations are given with no thought of fatigue or of recompense. His pecuniary reward is small and even the debt of gratitude may soon be forgotten. Then comes the long lull when the hand of disease is stayed and patients become so few that the law of self preservation asserts itself and the country doctor is forced to seek other fields. It is then that the community awakens to the fact that it has lost its most important member, all because it failed to render to him that which was his just due—a living income."

Thanks, Mac.

An example of how your *Journal* impresses physicians elsewhere in the country is expressed editorially in the last issue of the *Kentucky State Medical Journal*. Dr. A. T. McCormick, secretary of the Kentucky State Medical Association, and editor of its *Journal*, and prominent in affairs of the American Medical Association, an active member of its House of Delegates for a number of years, is the author of the compliment. He says in part:

"The November number of *The Ohio Medical Journal* has just come to our desk and, while we rarely feel that it is justifiable to make invidious distinctions, we believe this is the best number of a medical journal that we have ever read. From cover to cover it is full of interest. Its advertising pages are clean, and there is hardly any want of a physician that some one does not offer to supply.

"The editorials are timely, concise and well written. A symposium on Fractures, and the Medical Defense Aspect of Fractures is one of the most practical and valuable we have ever seen.

"A most interesting description of public health work in an Ohio county holds one. There are a number of purely scientific articles which are of especial interest. An address by Ochsner

on the 'Future of Medicine as Affected by Ultra Specialization' is one of the finest things we have seen, and we will reproduce it in this *Journal*.

"An especial notice called the attention of the physicians of the state to the importance in the management of the diphtheria epidemic."

In concluding his editorial Dr. McCormick congratulates the advertisers in *The Ohio State Medical Journal* for their wise choice in the selection of such a "splendid medium" for reaching the medical profession.

The Doctor's Morality.

In Massachusetts a physician was cited by the state board to show cause why his certificate authorizing him to practice should not be revoked because of his personal immorality. The doctor went into court and obtained an injunction, preventing the board from going into the matter. The theory of the doctor and the lower court was that morals had nothing to do with the matter of fitness to practice medicine. The state board, however, carried the case up to the supreme court, and that body upheld the state board and set aside the decision of the lower court.

"Mere intellectual power and scientific achievement, without uprightness of character, may be more harmful than ignorance," said the supreme court, which held that it is as essential to the public good that a doctor shall possess sound moral fibre as that he shall possess medical learning.

This is not a new doctrine. All thoughtful people recognize that character is, after all, the only thing in people which is worth while. It is gratifying, however, to note that such a high authority has set right the people who, through ignorance or presumption, denied it.—The Cambridge, (Ohio) Jeffersonian.

No Beer for Ohio.

The recent furore over the rules promulgated by the Federal Treasury Department permitting the manufacture and use of beer for medicinal purposes may all be very well, but "it doesn't mean anything," as far as Ohio is concerned.

The McCoy bill, enacted by the present Ohio legislature, and previously analyzed by this *Journal*, was in the nature of a "precautionary measure" to avoid the possibility of the legal manufacturing and dispensing of beer in Ohio. In only ten states may beer for medicinal purposes be permitted under the Federal beer regulations. They are Connecticut, California, Massachusetts, Maryland, Missouri, New York, New Jersey, Pennsylvania, Rhode Island and Wisconsin. The Willis-Campbell anti-beer bill pending in congress has been expected to be up for final action, following which if enacted, it will "take the joy out of life" even in the ten states.

The Treatment of Simple Compound Fractures*

WALTER G. STERN, M.D., Cleveland

Orthopaedic Surgeon to Mt. Sinai, St. John's and Rainbow Hospitals, Cleveland; Consulting Orthopaedic Surgeon to the Elyria Memorial Hospital and Surgeon-in-Chief to the Gates Hospital for Crippled Children, Elyria, Ohio.

Editor's Note.—Owing to the prevalence of malpractice suits based upon the untoward results of early operations on open fractures, and in view of the diversity of opinion among surgeons regarding the treatment of simple compound fractures, Dr. Stern again deems it imperative to emphasize the importance and necessity of conservative treatment. Unless immediate operation upon a compound fracture can be done under the aseptic precautions of the operating room, infection is almost always bound to follow interference. The fracture should, in no instance, be reduced until after the wound and bone fragments have been carefully cleansed and sterilized. It is usually unnecessary to excise much of the wound area. It is the part of discretion to do no bone, muscle, tendon or nerve operation immediately. Such operations are better done at the end of the period of infectious incubation.

THE pendulum of surgical opinion has so completely swung away from the routine operative treatment of ordinary fractures, that now it may be safely said that operative interference in fractures is legitimate only when there is an imperative surgical and mechanical need for internal correction and fixation. That all surgeons are not agreed upon this dictum in the early treatment of compound fractures is evident by at least seventeen references appearing in the English and American literature of 1920, in which the immediate operation of compound fractures is advised on the grounds that the open wound is already made and operation is safe; and from the many law suits for malpractice based upon untoward results after the early operations upon open fractures. The experience of the orthopaedic department of the Mount Sinai Hospital, Cleveland, in the conservative treatment of compound fractures during the last three years has been so at variance with the advice given in these seventeen reports that the writer deems it imperative to again appear before you to again speak on the conservative treatment of fractures.

METHOD OF HANDLING COMPOUND FRACTURES IN THE ORTHOPAEDIC DEPARTMENT OF

MT. SINAI HOSPITAL

In the last three years Mount Sinai Hospital has taken care of about 750 closed and 70 compound fractures, giving a proportion of compound fractures to the total number of slightly less than 10 per cent. For the purpose of properly assigning the cases in the hospital for treatment, and now also for the purpose of this discussion today, we have crudely divided the subject of the compound fracture into the *simple* compound fractures, by which is meant, one in which the fracture of the bones is the most important pathological condition, one in which the laceration and crushing of the soft parts is not the most vital feature of the injury; and the *extensive* compound fractures in which the frac-

turing of the bones is but an incident in the crushing and mangling of the limb and soft parts, and in which injuries to the muscles, tendons, nerves and blood vessels are of far more importance than the fracture of the bone.

It is with the first class of *simple* compound fractures that the orthopaedic department of Mount Sinai Hospital has been dealing and in the treatment of which I can offer you the following statistics. Out of the 69 compound fractures treated in the expectant and conservative manner to be outlined, there were only two infections. These two cases, both in young men, one suffering from a fracture of the femur, the second from a fracture of both bones of the lower leg, were injured in the same motorcycle accident and their wounds thoroughly contaminated with the dirt and soil of the same country road. They were not brought to the hospital directly, so that a period of 36 hours elapsed before the treatment to be advised could be instituted. Both cases had a very severe infection which was finally overcome by the use of the Carrol-Dakin method. Another case in our service does not come strictly under this category because the writer violated the principles he had laid down for the treatment of compound fractures, and in a case of compound fracture of both bones of the lower leg near the ankle joint, introduced a Steinman Pin into the os calcis for the purpose of making better extension, at the time the case was scrubbed up when first seen. While the wound did not become infected, the operative interference of driving the Steinman Pin into and through the os calcis so upset the circulatory balance of that part of the foot, that gangrene soon supervened and an amputation of the middle of the tibia had to be performed on account of gangrene of the foot and ankle. The compound fracture would have healed had it been left alone.

It has been my experience to have seen a large number of cases in which some sort of bone operation or instrumentation had been performed as a part of the first aid to compound fractures that had become infected from such procedures. So many indeed, that the wards of Mount Sinai

*Read before the Surgical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

Hospital are seldom without a case to illustrate the danger of infection from immediate operation upon a compound fracture.

The following advice could be given to those who first are called in to care for and to transport the victim of a compound fracture. After cutting off the clothing so that the fracture can be well inspected, the fractured area itself is not to be touched except that some form of antiseptic solution might well be flooded over the area and a sterile piece of gauze, moistened with such an antiseptic, should be placed over the wound to seal it, from then on, from external contamination. No attempt at reduction or manipulation is to be made. The limb is to be firmly bound to an improvised splint after the manner laid down in the rules in the "Manual of Orthopaedic Surgery, compiled by and for the American Expeditionary Forces."

With as little violence and motion to the injured part as possible, the injured person should be transferred, preferably to the operating room of a hospital or to a doctor's office in which minor operative surgery can be performed. Hemorrhage is to be controlled by pressure or tourniquet. When received at the hospital an anesthetic is given, the clothing is cut off and the limb carefully cleaned with benzine or gasoline, shaven and scrubbed up with alcohol, iodine or picric acid and again with alcohol and finally draped with sterile towels and sheets as though for a major surgical operation, by an assistant who wears sterile gloves and gown. *The bone fragments and the wound are carefully cleansed and sterilized and then and then only, are the fragments reduced through the skin by gentle manipulation and traction.*

If the fractured bone ends will not slip back beneath the skin, neither an instrument nor the gloved hand is to be used to push the ends of the bone back in, but the slit in the skin is to be enlarged with a pair of scissors and the bones reduced by traction, after which the skin can be loosely sewn up. Whenever possible instruments are not to be introduced into the wound. Larger pieces of bone are left in situ and moderate hemorrhage is controlled by pressure. Greater hemorrhage must be controlled by haemostats and ligatures. Dirt and foreign bodies are removed as gently but as completely as possible. *The soft parts are not to be excised as was advocated during the war, unless it is absolutely evident that they have been crushed beyond any hope of repair. It is often astonishing how badly the soft parts may look and yet recover under a conservative form of treatment. It is rarely necessary to cut away more than a few loose tags of skin.* A drainage tube has rarely been found necessary in my cases, and after "the toilet of the wound is prepared for tomorrow's needs", a few stitches are used and these are loosely tied; and with as little trauma and disturbance to the part as pos-

sible, the member is fixed in as good a position of reduction as can safely be attained and the patient sent back to bed for complete rest.

I have found a well padded plaster cast with large windows cut out over the area of the fracture to give the best fixation and therefore the most complete rest to the parts.

No bone, muscle, tendon or nerve operations are to be done at this time. If the wound should become infected after such operation, then the tendon or nerve plastics would be self-evidently failures. If the wound does not become infected, then the tendons, nerves or soft parts can be just as easily and a great deal more safely sutured and repaired at the end of the period of infectious incubation, than they could in the hurry and bustly of an emergency operation.

During the first few days the patient is kept quiet with opiates; dressings are only changed when necessity demands. Likewise slight fluctuations in the temperature are disregarded. Sharp rises in temperature and evidences of infection should be the signal for an anesthetic, the removal of the dressings, the opening of the stitches and the introduction of the Carrol-Dakin tubes. With the absence of signs of infection, corrective interference for the complete reduction of the fracture, permanent splints, casts or operative interference can safely be done on the 8th day.

It has been our custom that wherever the fractured ends could safely be brought into apposition or good alignment, to apply a well fitting plaster cast over the limb as would be done in the treatment of a simple fracture, cutting out a generous window over the fractured area for the purpose of facilitating changes in the dressings when necessary.

The entire principle in this method of treating compound fractures is to obviate the danger of infection by producing as little additional trauma to the injured parts as possible, to take advantage of the therapeutic properties of complete rest and to conserve to the utmost degree the damaged circulation in the injured parts. Advantage can be taken of position, for the purpose of increasing circulation and heat can be applied by the use of radiant light from electric bulbs in reflectors or the electric heating pad.

ILLUSTRATIVE CASE REPORTS

The author's experience in compound fractures has run a gamut of the entire osseous system from the head to the foot and there are no bones which inherently will not respond favorably to the above outlined system of treatment. Some of the most astonishing wounds, enough to cause the surgeon worry and sleepless nights were found to heal up quickly and favorably without the least untoward reaction. One case in particular deserves mention. A woman, age 46, was precipitated down a flight of stairs receiving a fracture of the lower end of the fibula

and the internal malleolus of the tibia, with the foot turned inward into the club foot position, the wound compounded straight across and the entire ankle joint with the fractured ends of both bones exposed to the air and dirt. She was received in the Mount Sinai Hospital one hour after the occurrence of the accident. The foot was carefully scrubbed up, the ends of the bones painted with iodine, the joint washed out with iodine followed with ether, the foot swung back into position, no sutures taken in the bone, the lateral ligament and skin merely sutured into place and the foot held reduced by means of a plaster cast as though it were a simple fracture. No infection supervened and the dressings did not need to be disturbed for six weeks, and when the cast was taken off it was found that union had taken place, the bone healed, and the foot was in good position.

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DISCUSSION

DR. ROBERT CAROTHERS, CINCINNATI:

Dr. Stern's paper is most timely. So much has been said and written recently about compound fractures, suggesting that new and wonderful principles of treatment have been discovered in this important branch of surgery. As a matter of fact, it is details of treatment of broken bones with infected wounds, which have filled our journals, while the principles of treatment are as old as modern surgery, and are directed toward one end, *i. e.*, reduction of the compound fracture into a simple fracture.

When a limb is fractured with sufficient severity to be compounded, the skin is broken in one of three ways; (1) either the injuring force has been directed through a small object which has first broken the skin and underlying tissues, and continuing further has broken the bone, or (2) such stresses have been put upon the bone as to cause it to snap, and the forces continuing have pushed the ends of the broken bone through the skin. In cases of the *first* type, which are usually seen in war surgery, considerable dirt has been driven into the wound, while in those of the *second* type, though the ends of the bone frequently become soiled and drag dirt into the wound when they are replaced, the amount of soiling with which the surgeon has to deal, is frequently less. There is still another type of case (3) caused by lacerating machinery, in which great areas of skin and flesh are torn open and badly soiled. These cases are the most serious.

It is generally understood how wounds made aseptically with a sharp knife, heal rapidly; and how even ragged wounds with considerable devitalized tissue, if uncontaminated, heal though slowly. But when we have a wound both ragged and dirty, containing blood clot, badly contused tissues and bacteria, we have in most cases the surest means of producing pus. In some cases of course, the body resistance is so great, and the number of bacteria so small that the latter gain no headway and the wound heals without much inflammation. But these cases can never be accurately anticipated, the bacteria are barricaded in masses of torn muscle and clots of blood, substances which at the same time offer food and shelter for the bacteria, and protect them from the digestive juices of the body, so that after a few hours of quiescence the wound is grossly infected. This period of pre-invasion

lasts from four to twelve hours and is occupied by the bacteria in accommodating themselves to their new environment. During this time few bacteria and no pus can be demonstrated and the constitutional symptoms are only of shock. Decidedly this is the best time to attack the wound.

If, then, our aim to reduce these compound fractures to simple ones is to be realized, we must *first* remove as nearly as possible all bacteria; *second* remove all culture media upon which they thrive; *third* prevent the further entrance of bacteria; *fourth* institute ample rest, and *fifth* do all of this early. If at the same time apposition of the fragments can be gained, and this is usually the case, so much the better; but to work with broken bones before a careful operation to close the wounded soft parts has been made is worse than futile, unless of course the case is already grossly infected.

In these cases then, our aim must be; to get the patient onto the operating table as soon and in as good condition as possible, for if success in turning compound fractures into simple fractures is to be realized, the sepsis must be nipped in the bud. This can be done in the majority of cases if the patient is operated upon early, and an operation which removes carefully and completely all foreign material, all blood clot, all contused tissue, then cleanses the wound inside and out, and closes it, is performed.

The previous cleansing of the skin and the final closure are of the greatest importance. For it is useless to remove bacteria if an entrance for reinfection is left, and if drainage does later become necessary, it can always be obtained quickly, by removing a stitch or two.

Splinting to provide ample rest, and at the same time permit inspection of the wound is very important. Sterilization of the wound is never absolute, but only relative, and rough handling of a limb may cause just enough bleeding and just enough lowering of the patient's vitality to change the course of the wound from healing to sepsis. I have had very bad dirty cases do far better when dressed only once a week, than when *fooled with* every day and the delicate granulations broken and contused as fast as they formed.

The less that is done previous to a formal operation and the less shock the patient suffers in getting to the hospital, the better, and for those who see these cases only occasionally, education in first aid is clearly necessary. The most efficient treatment is: A sterile dressing preceded by the removal of any obvious dirt, a Thomas splint, sometimes a tourniquet and sometimes morphine. The wound is already infected and halfway cleansing may mean added infection, therefore the sterile dressing to keep out fresh infection is the best to be hoped for as first aid. The Thomas splint is very easily applied and will give the patient a comfortable ride to the hospital. It can be put on over the clothing requiring only a few bandages to make a bed between the rods, and the traction can be made from a heavy bandage thrown round the wrist or ankle in a clove hitch, or from a large spike thrust through the shoe between the sole and the arch of the foot. If the splint is applied in this simple and speedy manner, a sufficient amount of traction applied, and the splint suspended so that the limb is resting on the bed of the splint and not on the jarring stretcher, the patient can be brought to the hospital or other place where a real operation can be performed, in reasonably good condition.

Too much stress can not be laid on these simple points, for if the surgeon is to do any good toward cleansing the wound, he must get the pa-

tient early and in a condition to stand operation. The added shock and lowered vitality caused by the injudicious messing about at the original dressing, and the jar, jar, jar with the grating of bone ends, contusion of tissues and bleeding, not obviated by proper splinting is seldom necessary. Nor is delay excusable, for in these cases the doctor is called at once. Nowadays no one would think of waiting for an appendix to perforate, or to see what would happen if some of the placenta were left in the uterus, we would get rid of the infection by bodily cutting it out as soon as we could, and we would not leave the wound open unless the peritoneum were dirtier than the skin. Too often we hear that we must not go to a fracture as we would to a fire, or that we will let the patient rest today and set the leg

tomorrow; or we will wait and see how much sepsis we are getting before we do anything about it, with just enough delay resulting to permit anything from long drawn-out sinuses to death as the result. Because an occasional case gets well, in spite of poor treatment, is no excuse for neglecting another. Of course there are cases, in which the condition of the patient will not permit ideal treatment of the wound, then we must admit that we are severely attacked, and are ready to expose a flank to save the center, but these cases fortunately are not common. In the majority of cases, in my own series fourteen out of fifteen, the wound can be handled as wounds should be handled, and the compound fracture of ten days ago made into a simple fracture of today.

Bone Grafting and its Clinical Application*

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Editor's Note.—The bone graft has been proved a very trustworthy surgical agent, and with the development of motor driven instruments, its value has been greatly enhanced. The results following bone grafting are among the most gratifying in surgery and what can be accomplished is at times marvellous. The graft can be depended upon to span a gap of any size and will hypertrophy according to Wolff's law and will possess the size and strength of the bone into which it is grafted. Six cardinal points are of paramount importance for perfect results, (1) perfect aseptic technique; (2) waiting a sufficient period of time after healing to avoid the recrudescence of a latent infection; (3) avoidance of trauma; (4) perfect haemostasis; (5) perfect contact of graft with healthy vascular bone above and below; and (6) the graft must be of sufficient length to reach well into healthy vascular bone and must be immobilized for a sufficient length of time. The only contra-indications to bone grafting are an active septic field and active constitutional disease, especially syphilis.

IN the brief period of time allotted for the presentation of this paper, an extended resumé of the literature and history of bone grafting is impossible. For that reason the writer will only touch briefly upon the work of those whose investigations stand out most conspicuously.

HISTORICAL CONSIDERATIONS

Havers, in 1692, gave the first accurate account of bone structure and he described the periosteum as simply a connective tissue limiting and vascularizing membrane. Antoine de Heyde, in 1684, published the first experimental observation made on frogs, and concluded that callus was formed by the calcification of blood clot extravasated around the broken bone ends.

The first systematic work on this subject was carried out by Duhamel in the middle of the eighteenth century, (1739-1743).

A century later came the great work of Ollier (1867) which remains today a classic of surgical literature.

During the past fifty years there have been three men, Barth, Axhausen and Macewen, whose research work has marked an epoch in our knowledge of bone development.

Ollier's views are today to a great degree still unassailable. He held an exaggerated view of

the rôle of the periosteum, but nevertheless, he quite clearly states that the periosteum in flaps or transplants is only fully osteogenetic in the young and not so in adults.

Ollier points out that compact bone can live, grow and undergrow repair quite independently of its covering membranes, and he recognized the fact that separate living bone and bone fragments devoid of periosteum could live and grow in suitable environment. He showed that if the periosteum were removed, the bone beneath quickly reformed a new periosteum, which had the same osteogenetic properties as the original periosteum.

Barth, in 1893, showed that in spite of the smooth healing of a bone graft, the greater part of the cellular contents of the graft underwent necrosis, and he went as far as to deny that there was any difference between the behavior of a graft of living bone taken from the same animal (autogenous graft), that from another animal of the same species, (homotogenous graft), that from an animal of a different species (heterotogenous graft), or boiled and devitalized bone.

He later abandoned this extreme view. He also was of the opinion that there was an absorption of the necrosed portion of the graft and new bone grew from the surrounding bone into the graft.

Axhausen, in 1898, did extensive experimentation and amongst the most important points brought out by him were the following: (1)

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The periosteum is the agent producing osteogenesis. (2) The periosteum and endosteum survive transplantation though the cells of the compact bone die. (3) Homoplastic grafts behave similar to autoplastic grafts, except that their viability and osteogenetic power are decidedly less. (4) The viability and osteogenesis of a graft devoid of periosteum is decidedly less than a graft with periosteum.

Macewen's experiments also brought out among other observations, the following most important points: (1) Failure of periosteal flaps to produce new bone. (2) Removal of entire periosteum did not affect the life and growth of bone.

RÔLE OF THE PERIOSTEUM AND MARROW

To summarize: *The rôle of the periosteum* may be said to be chiefly that of a limiting membrane. The dense bone can live, grow, undergo repair and produce new periosteum after the latter has been removed.

In young bones, it is possible for bone to regenerate after subperiosteal resection, this being probably due to the lifting of the deeper layer of periosteum also. In adult bone, this is impossible, except after trauma or inflammation.

Nevertheless, the retention of the periosteum is desirable in bone grafting though not necessary, because it affords a ready means whereby the graft may become vascularized.

As regards *the rôle of the marrow tissue*, no one has as yet suggested that the marrow can be used as a free graft with osteogenetic results, but the cells next to the bone, that is the endosteum, has considerable capacity for osteogenesis, and if grafted in such a manner as to allow a rapid vascular connection with its bed, it will take an active share in new bone formation.

Compact bone, if it has a good blood supply, is quite independent of either periosteum or endosteum for growth and repair. If deprived of its blood supply temporarily, as in a graft, the greater part of its cells die, but those on all the free surfaces, periosteal, endosteal and cut edges, survive and proliferate to form new bone.

VARIETIES OF GRAFTS

Of autogenous, homotogenous and heterotogenous grafts, autogenous grafts (from the same individual) are the most trustworthy by far.

With primary union and absence of infection, autogenous bone grafts, when properly contracted, are always successful, and even infection does not necessarily indicate failure. Homotogenous, that is a graft from an individual of the same species, act similarly to autogenous grafts, but their osteogenetic power is lower and they are apt to carry disease. Heteroplastic grafts (those derived from another species) possess no osteogenetic power, and act in most instance as a foreign body. Should they become slightly infected, they are extruded as sequestra.

In some instances, however, a heteroplastic graft acts as a scaffolding along which new bone grows, and it may eventually blend with the living bone into which it was grafted.

Gallie has operated several cases of spinal tuberculosis into which he has grafted boiled beef bone with successful results.

CLINICAL APPLICATION

In attempting a bone grafting operation, an absolutely aseptic technique must be rigorously carried out. Undue trauma may be avoided through the use of ample incisions to expose the field. Forcible retraction of soft parts is to be avoided. The skin incision should be so placed that when closed it will not come directly over a superficially placed graft, thus lessening the danger of infection of the graft should a stitch abscess develop.

In cases in which there has been no primarily external wound and no infection, bone grafting may be undertaken at any time.

Latent Sepsis.—In this class are cases that have had external wounds attended with supuration, and eventual healing after subsidence of the infection. After complete healing of the wounds, a non-union is present.

But in the scar tissue infectious material of a very active potency may lie dormant, and any wide opening of the tissues will cause this latent sepsis to spring into a very malignant activity, with danger to life, and limb and may result in failure of the operation. One occasionally sees a successful bone graft in spite of infection, but the infection usually is a very mild one.

Time of Grafting.—How long after the wound has healed may we attempt bone grafting? Albee has placed bone grafts in mildly suppurating wounds and has had perfect results. Others have had failures, due to the activating of a latent infection, as late as nine months after wound healing. On the average, a period of at least four to six months should elapse after healing has taken place before bone grafting may be reasonably safe.

Since most of the septic organisms lie dormant in the scar tissue, this should be removed wherever possible as a preliminary to a bone grafting operation.

The Source of the Graft.—There are three chief sources of obtaining a graft; the tibia, the fibula and the ribs.

Where great strength is required, the crest of the lower tibia may be taken as the bone here is very strong and dense. Otherwise a graft may be removed from the antero-internal surface of the tibia. This latter should be used whenever possible, as a graft from this portion of the tibia is more actively osteogenetic and its blood supply is more readily established than a graft from the crest, and fracture of the tibia may follow a slight trauma after removal of the crest.

The fibula may be used when a long length of graft is necessary.

The entire fibula with the exception of its lower 3 or 4 inches may be removed without future disturbance to the function of the foot or leg.

The rib has often been used for grafting. The tenth rib can readily be spared and is easily removed and easily cut. However, the rib graft is feeble and when transplanted it does not seem to grow into a large sturdy bone. The rib graft is seldom used except to repair defects in the skull or jaw.

Whenever possible the graft should consist of all its components, periosteum, cortex and marrow. Previously I called attention to the fact that bone deprived of periosteum and marrow will live, grow and produce new bone, nevertheless, osteogenesis will be more active and circulation more quickly established if these structures are included with the graft.

Cutting the Graft.—This may be done with a narrow sharp chisel, but the graft is apt to fracture, and repeated blows from the mallet produce considerable trauma. The motor saw of Albee is the best of the various motor driven bone instruments.

If the graft is to be removed from the internal surface of the tibia, it is exposed through a long flap incision. The shape and size of the graft should be outlined by a knife-cut through the periosteum. With the twin circular saw, this outline is followed to a depth of $1/8$ or $1/16$ of an inch. The twin saw may now be disengaged and a single circular saw substituted, and the bone sawed through down to the marrow cavity. If preferred the twin saw may be used throughout. The upper and lower ends of the graft may be sectioned transversely with a marrow osteotome or a small circular motor saw. The graft is now free and is pried out of the bed.

Preparation of the Bone to be Repaired.—If, for example, the bone to be grafted is the tibia and the grafting is done for the repair of an ununited fracture, or to repair and replace the loss of bone due to injury or disease, the site is freely exposed through a generous incision. The fragments are brought into alignment and the fibrous tissue around the bone ends is removed with a thin sharp osteotome.

Then with the twin circular motor driven saw, a slot is cut into each fragment extending well beyond the sclerosed bone into healthy vascular bone. The small fragments thus outlined between the saw cuts are discarded.

The graft is then cut out using the same adjustment of the twin saws, thus insuring an accurate fit. The graft may be obtained from one of the fragments if practical, and in a pseudoarthrosis should be 5 or 6 inches in length, never less than four.

The graft is then fastened in place either with

bone pegs or by means of Kangaroo tendon sutures.

This briefly is the technique of the inlay graft. It is the ideal method because there is accurate coaptation of all the elements of the graft, that is, the periosteum of the graft is in apposition with the periosteum of the grafted bone, cortex with cortex and marrow with marrow.

The intra-medullary graft is much easier of performance than the inlay graft. All that is necessary is that the graft be cut the size of the medullary cavity, roughly shaped as a peg at each end and fitted into the marrow cavity of each fragment, requiring no other fixation.

This method is less successful than the inlay method. Should it succeed, union is less firm, osteogenesis is slow and there is danger of fracture of the graft. A graft may be inserted by use of a combination of both methods. For instance, in a case of ununited fracture of the humerus, a short distance below the head, in order to avoid opening the shoulder joint, the writer inserted the graft into the marrow cavity of the upper fragment and performed the inlay technique on the lower fragment. There resulted eventually firm bony union.

PRECAUTIONS

Various agents which have been used to secure fixation of the graft, particularly metal, should be avoided, as they act as irritants and tend to active osteogenesis. Bone pegs or Kangaroo tendon are safe and entirely reliable and satisfactory.

Hemostasis must be perfect, as blood clots, besides interfering with the proper vascularization of the graft, are a fine culture media for bacteria.

The soft parts are then closed, carefully avoiding dead spaces, and usually without drainage.

The limb is then immobilized for two to four months at which time passive motion and massage may be instituted.

According to Wolff's law, the graft will hypertrophy and become the same size and strength as the bone into which it was grafted.

INDICATIONS FOR USE OF THE BONE GRAFT

The bone graft has been utilized in a variety of conditions, and has been recommended in still a greater variety of conditions.

There is no doubt that some of the exponents of bone graft surgery have allowed their enthusiasm to out-distance conservative thought. They have, figuratively speaking, bone grafted every thing that could be bone grafted, when in many instances the same results could have been attained through ordinary and less spectacular operative procedures.

The four greatest and most important indications for the bone graft are, *first*, the repair of ununited fractures; *second*, to secure immobilization and fixation of a tuberculous spine; *third*, to repair and replace bone lost through accident

or disease, and *fourth*, to supply bone congenitally absent.

Other indications for the use of the bone graft are (1) As a substitute for foreign bodies, especially metallic, used in the internal fixation of fractures. (2) To produce immobilization and fixation of an un-united fracture of the spine, especially in cases of compression fracture of the vertebral bodies, where there is chronic stiffness, rigidity, pain and increasing deformity, (Kyphosis). (3) To produce fixation in other tubercular joints. (4) To correct and prevent the further development of scoliosis or other deformities. (5) To produce ankylosis of various joints for inducing stability. (6) To prevent outward dislocation of the patella by inserting a bone graft wedge in the external condyle of the femur. (7) To replace the head and neck of the femur when previously destroyed, using the head and neck of the astragalus as a graft. (8) To repair deformities of the nose (saddle nose). (9) To repair defects in the skull. (A graft from the tibia or a portion of the scapula may be utilized) and other indications of less importance.

CONCLUSIONS

In conclusion, the bone graft has been proved a very trustworthy surgical agent, and with the development of motor driven instruments, particularly the circular saws, its value has been

greatly enhanced.

The results following bone grafting are among the most gratifying in surgery, and what can be accomplished is at times marvellous.

The graft can be depended upon to span a gap of any size and will hypertrophy according to Wolff's law, and will possess the size and strength of the bone into which it is grafted.

Six cardinal points are of paramount importance for perfect results, *namely*: (1) Perfect aseptic technique. (2) Waiting a sufficient period of time after healing to avoid the recrudescence of a latent infection. (3) Avoidance of trauma. (4) Perfect hemostasis. (5) Perfect contact of graft with healthy vascular bone above and below. (6) Graft must be of sufficient length to reach well into healthy vascular bone, and must be immobilized for a sufficient time.

Contra Indications:—The only contra-indications to bone grafting are an active septic field and active constitutional disease, especially syphilis.

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Some of the Relations of Pediatrics and Obstetrics*

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Editor's Note.—On account of the growing relation between feeble-mindedness and prolonged hard labors as well as the incidence of cerebral haemorrhage as a cause of infantile deaths, it is apparent that the proper care of even a normal labor case, especially in primiparae, requires much more skill and attention than is ordinarily given to insure a normal child. The second stage of labor seems to be the time when most of the trauma to the foetal brain occurs and is also, fortunately, the time when assistance can be rendered. With proper pre-natal care and more attention to the foetal heart tones at the time of delivery the pediatricist will be relieved of the care of a large number of nervous cases in which his results are anything but satisfactory. A closer cooperation between the Departments of Obstetrics and Pediatrics in our Medical Schools should lead to a much better understanding of many indefinite cases of nervous disorders in children.

DURING the last few years, we have been confronted with many new ideas for the conduct of what we have been calling, *normal labor cases*. Probably the chief reasons for these new ideas have been: *First*, a closer attention to the foetal heart tones, especially, during the second stage of labor; *second*, the results of investigations in feeble-minded institutions which revealed the relation between idiocy and feeble-mindedness and prolonged hard labor; *third*, recent series of autopsies on new born which revealed cerebral hemorrhage as the cause of death in a large percentage of instances.

STATISTICAL DATA

T. Hansen, in 1913, reported the following:

994 cases were examined at the asylum for feeble-minded at Copenhagen. It would have been rational to expect among the numbr, 167 first born feeble-minded, but in fact there were 234. Westergard has proved that the first born is more frequently stillborn than the following children. Stillbirth of the first born is more frequent in older mothers.

Stein, in 1917, after an investigation of 5,562 cases in various homes for feeble-minded, advocated the earlier use of forceps in prolonged or hard labors or the use of small doses of pituitrin to lessen the traumatism on the newborn's brain.

Potter has reported that he personally delivered 1,133 cases in one year, and performed version and extraction in over 900 of these, thereby reducing pressure on the baby's brain by eliminating the second stage.

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DeLee, is advocating the *prophylactic forceps*, for the expert, to eliminate most of the second stage of labor, and claims better babies and a smaller foetal mortality because of the small amount of trauma on the baby's brain.

RESULTS OF A PERSONAL STUDY OF 700 DISPENSARY CASES

With these facts in mind the writer studied the records of over 700 cases of children coming to the dispensary of Children's Hospital at Columbus, hoping to determine if there were any relations between the condition of these children and the order of birth, and kind of delivery. We expected to find that the first born children, other things being equal, would form a larger percentage of the attendance, and that they would be more subject to nervous disorders for this reason. We believe that practically all of the mothers of these children were delivered in this way, the doctor was called when the mother went into labor, he came and examined her, determined about what hour she would deliver and returned probably in time to support the perineum or tie the cord. If a tear occurred, it was improperly repaired, or not repaired at all. The foetal heart tones were probably never heard or even listened for. The second stage of this first labor probably lasted from one to three hours during which time the head was caught between the strong levator ani muscles and the symphysis with strong pains compressing the brain and doing severe damage in a large number of cases. This would account for Westergard's statement that the first born, is more frequently stillborn and that stillbirth of the first born is more frequent in older mothers. They usually have a more rigid perineum. The subsequent children had the same sort of medical attention probably, but they met comparatively little resistance from the perineum because it was torn with the first delivery, therefore the subsequent children had a second stage of only fifteen minutes to one hour.

To the men who say that they have delivered several hundred babies without laceration primiparae included, I only wish to call their attention to the statement of Dr. Williams that on his service at Johns Hopkins 60 per cent. of primiparae suffer lacerations, and to the statement of Dr. DeLee that he has yet to see an anatomically perfect perineum in a woman that has had a spontaneous delivery of a normally large child at term.

While making this study I reviewed 20 cases of death before three months of age, during two months in Columbus, and found that 10 of these were the first born.

Of the 700 cases studied at the Children's Hospital, 400 histories were found which we felt were complete enough to use for our purpose. The incompleteness of the others was due chiefly to the fact that in a great many cases, histories were obtained from the children in the absence of their

parents. We tabulated the findings from the histories under the following heads: Name, Age; Order of Birth; Chief Complaint; Number of Children; Wassermann; Urine Analysis; Von Pirquet; Vaginal Smears; Miscarriages; Character of Labor; Treatment; Remarks. Of the 400 cases, 168 or 44 per cent. were the first born. We would expect not more than 133 or 33 per cent. as the families included 1,372, all possible patients. There were only 48, one child families, which we think eliminates any inaccuracy from statistical errors.

We found 99 cases with the chief complaint as follows: Eyes, enuresis, general weakness and nervousness. We did not count the cases with the above complaints, in which we could find positive laboratory findings such as, plus Wassermann reactions or positive Von Pirquets or those which gave a family history of weak nervous system. Practically all of these cases were negative so far as definite diagnosis were concerned, except slight errors of refraction in some of the eye cases. Of this group of 99 some 68 or 67 per cent. were first born, 14 second born, and 7 third born.

FOETAL HEART SOUNDS AND BRAIN INJURIES

We feel that the above results are not surprising to an obstetrician who has carefully watched the foetal heart tones in a large number of cases and is familiar with how often in the second stage the heart tones become irregular, which is to our mind evidence of injury to the foetal brain. *If the second stage in primiparae causes more frequent stillbirths because of cerebral hemorrhage, we certainly must have many cases of hemorrhage not severe enough to kill but severe enough to permanently damage the nervous system.*

We realize that our series is very small, but we believe that the completeness of the histories used makes the results more accurate than a larger series of cases from less complete records and histories and the findings correspond with those of all the larger series.

Under the Obstetrical Department of the Medical College of Ohio State University and through the District Nurses' Association, we are developing several large pre-natal clinics, where along with the usual instruction in the hygiene of pregnancy and prophylaxis against the toxemias, each patient has a routine Wassermann examination. We are endeavoring to subject all syphilitic mothers to treatment before delivery and hope in this way to reduce the number of congenital syphilitic children.

Regarding the delivery of these cases, we require a record of the foetal heart tones every fifteen minutes to one half hour during the first stage and every five minutes during the second stage. The instructions are that if during the second stage the foetal heart tones become irregular or the rate below 100 or above 160 the

attending obstetrician is to be notified at once and preparations made for immediate delivery; the delivery to be performed by the method best suited to the individual case.

We feel that by more careful attention to these two important factors in foetal morbidity and mortality, we can turn these babies over to the pediatrician in a much better condition than heretofore, and with the babies he may have a complete story of its most important event in life. From the records of the pediatric department we hope to be able to see the results of the services rendered in the obstetrical department and check-up the subsequent history of the babe with a record of its birth.

SUMMARY

First, the proper care of even a normal labor

case, especially in primiparae, requires much more skill and attention than is ordinarily given to insure a normal child.

Second, the second stage of labor seems to be the time when most of the trauma to the foetal brain occurs and is fortunately the time when assistance can be rendered.

Third, with proper pre-natal care and more attention to the foetal heart tones at the time of delivery, the pediatricist will be relieved of the care of a large number of cases in which his results are anything but satisfactory.

Fourth, a closer co-operation between the Departments of Obstetrics and Pediatrics in our Medical Schools should lead to a much better understanding of many indefinite cases of nervous disorders in children.

240 E. STATE STREET.

Incidence and Mortality of Congenital Lues at the Babies' Dispensary and Hospital of Cleveland*

C. W. BURHANS, M.D., Cleveland

Editor's Note.—In a series of 20,911 dispensary cases under three years of age, Dr. Burhans found an incidence of 1.05 per cent. congenital lues. The negroes, the white Americans and the Italians showed a high incidence of congenital lues, while the Jewish race showed a very low incidence. The known mortality from all causes of 141 cases, followed where possible for three years, was 34.7 per cent. These figures emphasize the importance of diagnosing and treating congenital lues.

THIS study includes all cases admitted to the dispensary from the time of its opening in July, 1906, to the 1st of January, 1920. The "hospital" consists of an outdoor ward open only during two or three hot months of the year. Children under three years of age are treated. The staff consists of a medical director, three senior physicians and from five to eight attending physicians. The medical director is the Professor of Pediatrics in the Medical Department of Western Reserve University, and the senior physicians are men of several years experience in this dispensary and who are on the teaching staff of the university. The material is used for the instruction of senior medical students who are in attendance practically the entire year. All new cases in which there is a question of diagnosis are seen by the director or one of the senior physicians.

The Wassermann reaction has been done, in the last six years, on all cases in which there has been anything suspicious in the family history, personal history, or physical examination. Prior to 1914 the diagnosis was based on clinical findings. Besides the above Wassermanns, the test has been done on all children who are to be placed in boarding homes. We have a record of 1,019 reactions.

RECORDED INCIDENCE OF CONGENITAL LUES

A complete review of the literature on the incidence of congenital lues will not be attempted. This was done by Churchill and Austin¹ in 1916. The largest series they report is that of Jeans and Butler who out of 5,185 children, found 4.9 per cent. in those under 13 months of age, and 1.5 per cent. in those over that age. A children's clinic in Prague had 5.7 per cent. syphilitics in 2,533 cases. In Churchill and Austin's carefully studied series of 695 cases there were 3.3 per cent. congenital syphilitics.

Griffith in his book cites the following additional studies:—

Fruhinholz, 1903, 1.07 per cent. in 17,282 cases under 12 years. (This includes acquired syphilis, the number of which he does not state.)

Still, 1904, 0.6 per cent. in 4,830 cases.

Neuman and Oberwarth, 1905, and Cassel, 1909, with 66,221 and 17,448 cases respectively, each about 1 per cent.

Jeans,² who has probably done the most work on the subject in this country, believes that 5 per cent. of the infant population is syphilitic. He quotes Holt who found 6.2 per cent. positive Wassermann reactions taken at random in children under 2 years, and Comiskey with 3.2 per cent. in 1,074 newborns. The vital statistics of St. Louis show syphilis as the cause of 3.5 per cent. of the deaths in infants.

*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

CLEVELAND STATISTICS

In Cleveland, I found the following data:—

RACE INCIDENCE OF CONGENITAL SYPHILIS

The race incidence of congenital syphilis is

	*1910	1911	1912	1913	1914	1915	1917	1918	1919	Total 9 yrs.
Deaths under one year.....	2058	1787	1799	2002	1946	1916	2213	2010	1743	17,464
Deaths due to lues under one year	66	72	23	47	47	23	23	28	20	350
Per cent.	3.2%	4%	1.3%	2.3%	2.4%	1.2%	1%	1.4%	1.1%	2%

*(Previous to 1910 and for 1916 the figures were not available.)

The declining incidence of congenital lues as a cause of infant mortality, I am unable to explain, but it may possibly be due to increased facilities for diagnosis.

Our series at the dispensary consists of 20,911 cases. Of these 249 had been diagnosed congenital lues. On examination of the records 29 of these were discarded for a lack of evidence for the diagnosis. This leaves 220 in which the presence of the disease seems reasonably certain and is a percentage of 1.05.

As this seemed to be a very low incidence when compared to other American reports, especially

quite striking. In going over the charts the writer was impressed by the large number of pure American names in a clinic composed largely of foreigners. Of the fathers of the luetic infants 27 per cent. were white Americans. In seven of the fourteen years included in this study, the attendance by nationality was summarized in the annual report of the dispensary. This showed 11.8 per cent. of the total admissions were Americans. The negroes ranked next highest and Italians third. In the Hebrew race there is very little syphilis. The following table shows the racial incidence:—

	American	Negro	Italian	Hungarian	Austrian	Slovak Polish	German	Irish	Hebrew
Per cent. of all admissions to clinic.....	11.8	5.3	12.5	8.3	1.1	14.9	6.3	2.7	21.7
Per cent. of all syphilis.....	27.2	17.3	13.2	5.4	0.9	4.6	2.7	2.3	3.2
Calculated race incidence per cent.....	2.4	3.3	1.08	0.7	0.8	0.3	0.46	0.9	0.15

that of Jeans, a further study was made. We planned to do Wassermanns on all admissions to the Babies' Dispensary and the Children's Dispensary of Lakeside Hospital, obtaining at least 400 from the former and 100 from the latter. (In the latter clinic most of the children are between three and fourteen years of age.) Certain obstacles were encountered which to some extent obviate these results. These were, refusal of parents, serious illness, lack of time on the part of the physicians. In all 577 Wassermanns were done on 538 cases, 450 at the Babies' Dispensary and 88 at Lakeside. There were 6.2 per cent. of the former positive and 5.7 per cent. of the latter. This does not show the true incidence at the dispensary since only 65 per cent. of the total admissions in that period were examined. Granting, however, that all cases not examined were negative, we still have an incidence of 4 per cent. This marked disparity, when compared to our previous findings, is hard to explain. It is probably due to a great increase in the negro attendance, a matter which will be discussed later. To check the clinical and laboratory examinations, the charts of the positive cases were examined for evidence of lues and in 86 per cent. there was ample evidence to warrant a blood reaction.

At present it is estimated that 40 per cent. of the total attendance at the clinic are negroes. In the series of Wassermanns over half of the positive cases belonged to that race. This undoubtedly accounts for the more frequent occurrence of syphilis.

MORTALITY

These figures are calculated only to the end of 1916 as cases are followed for a three year period. Every possible means is used to ascertain the condition of the child before it is discharged, on account of being overage. If dead, the date and the cause of death are recorded on the chart. To check this, reports are obtained from the city health department of the death certificates of all children under three years of age. Doubtless there have been deaths in families who have moved from the city and these would not be included except in a few instances where the information was obtained from relatives or neighbors. The known mortality for 141 cases is 49 or 34.7 per cent. In 15 of these, most of whom died while under the care of institutions, the cause of death was given as congenital lues. Excluding one child that lived six months, the average duration of life after admission to the dispensary was only fifteen days. The average age on admission was 2.7 months. Eleven other cases died in hospitals and in most of these lues

seems to have been a minor or negligible factor as a cause of death. Of twenty cases dying outside of hospitals the greater part had on their certificates some intestinal or nutritional disturbance, as *marasmus*, *malnutrition*, *entero-colitis*. Post³ says, "The term *marasmus* has become a synonym for hereditary syphilis in the death certificate."

This is a mortality in congenital lues very close to that in a series of 100 cases, carefully followed and reported by Veeder and Jeans,⁴ which was 40 per cent. Jeans² has since stated that 25 to 30 per cent. of clinically syphilitic infants die as result of their syphilis. A recent report from Germany gives a mortality of 22.8 per cent. in 202 cases which were followed in an institution for from two to ten years.

The treatment has been almost entirely mercurial. The difference in the mortality of the breastfed and artificial fed is not so striking as in the series of Veeder and Jeans⁴. Of those who died 50 per cent. were exclusively breastfed while only 55 per cent. of the living are in the same

class. An attempt was made to bring the cases who had been out several years to the dispensary for examination and Wassermann. This was found to be hopeless as only six out of a possible fifty could be located.

SUMMARY

In a series of 20,911 dispensary cases under three years of age, 1.05 per cent. congenital lues have been found.

The negroes, the white Americans and the Italians show a high incidence of congenital lues, while the Jewish race shows a very low incidence.

The known mortality from all causes of 141 cases, followed where possible for three years, was 34.7 per cent.

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4. Veeder and Jeans: *Am. J. Dis. Children*, 1916, Vol. 11, p. 177.
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The Cooperation and Correlation Between Laboratory and Clinic*

HOWARD T. KARSNER, M.D., Cleveland

Editor's Note.—Coöperation between the laboratory and the clinic implies mutual effort for welfare on the part of compeers in both fields. Correlation between the two necessitates opinions and results based on the ground of comparatively equal ability, training, experience and judgment. Only on the basis of cooperation and correlation of these two fields can medicine advance. Only on this principle can medicine rise above its position as an art and approach more nearly its desired place as an exact science insofar as biology permits of precision and exactitude.

IN a discussion of this topic it is well to define terms so that no misunderstanding may arise over confusion as to what is meant by the *laboratory* and the *clinic*. These two institutions serve the common purpose of medicine as an art and science and in order to fulfill this function in the highest degree the conception of service must be maintained. The clinician is one who studies disease particularly in the living patient and is accordingly restricted in his methods by his inability to delve into all the recesses of the body. He must observe deep alterations somewhat indirectly by means of his unaided and aided senses. In the surgical clinic it is possible to make more extensive direct observation than is the case in the medical clinic but even here the necessity for preservation of life imposes considerable difficulty. The laboratory worker may best be presented as the pathologist, who is a physician trained in the methods of the laboratory. Where his work concerns living patients he is subject to much the same restriction as is the clinician. Where he works in the postmortem room he can use many

methods of observation of deep structures not available to the clinician.

THE COMMON BOND

One thing these two groups of workers have in common, *namely* that they are physicians. The chief difference is in methods of training and observation and in availability of material for study. The older conception of the clinician as one who takes the history and makes a physical examination and perhaps does an operation, and of the laboratory worker as one who clothes himself in a none too clean apron and cuts up a dead body is now relegated to the past. Modern clinical medicine employs instruments of precision based upon applications of pure science to aid in exact observation. The modern pathologist similarly calls to his aid in the study of disease instruments of precision. Both divisions call into service methods based upon chemistry, physics, bacteriology, immunology and other fundamental sciences in order to clarify diagnosis, aid in the prevention of disease and estimate the results of treatment. Studies in these fields form the connecting link which serves to bring into harmony the work of the clinician and of the laboratory

*Read before the Medical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921. From the Department of Pathology, School of Medicine, Western Reserve University.

worker. The great clinics have as a part of their organization a considerable amount of laboratory space, apparatus and personnel. These may be utilized by members of the clinic or by members of the laboratory staff, depending very largely upon local conditions.

A proper cooperation demands that where the clinician's work involves the use of laboratory methods the laboratory worker should have sufficient skill, interest and knowledge to aid in the direction of this work. Similarly, the scope of work in the laboratory so often bears upon problems of the clinic that the clinician must be of such calibre as to aid the pathologist in this activity. The fact that both types of workers are essentially physicians is the basis upon which a common meeting ground may be established.

It is not necessary at this time to devote any considerable attention to the problem as to whether or not the laboratory worker may be a person trained in some of the fundamental sciences without being the possessor of a degree in medicine. If, however, the conceptions given above are correct, it is reasonable to state that even though the laboratory worker has not a degree in medicine, yet the greater his understanding of medical science the greater is his usefulness. When one considers the great contributions to medicine made by those who have not had degrees in medicine, including Pasteur, Metchnikoff and numerous instances among our own contemporaries, it must be admitted that the possession of this degree is by no means an essential. The broader aspects of cause and effect in relation to disease do not necessarily require a detailed training in physical diagnosis, operative technique and other clinical studies, which go to make up a large part of the medical student's training in his clinical years. On the other hand, the chemist or physiologist who scorns these methods is not properly equipped to participate in the study of disease and the advancement of medicine.

THE LABORATORY AND MEDICAL EDUCATION

The importance of the laboratory division in the training of medical students is so far recognized that approximately half the time in a medical school is now devoted to this type of work. With the constant changes observed in medical curricula it may be that the future will show a smaller proportion of time for laboratory work, but those who are interested in medical education concede that the actual amount of time spent in the laboratory divisions is of the utmost importance and that any changes that may be instituted will be in proportion rather than in absolute time.

Effective administration in the army hospitals was found to be best served by making three divisions of the hospital; medical, surgical and laboratory. The same principle is being applied in the organization of new hospitals and reor-

ganization of old hospitals in civil life. Such an arrangement would be impossible and impracticable were not the chief of the laboratory division to be regarded as a physician differing from his colleagues only in training and in methods.

SCOPE AND UTILITY OF THE LABORATORY

The evolution of the laboratory from a place where knife, microscope and a few stains were employed, to an institution which covers work in pathological anatomy, histology, bacteriology, chemistry, immunology, roentgenology, and various other divisions, has been one of the astounding features of modern scientific advancement in medicine. To conceive of any one individual who has equal facility and skill in all these divisions of laboratory work is to conceive of the clinician who has equal facility in all the specialties which have developed, including in the medical field dermatology, neurology, and in the surgical field ophthalmology, otolaryngology, gynecology and numerous other special subjects. The chief in any of these divisions must necessarily be a man of broad training who can understand the difficulties and practical limitations with which the specialist must be intimately familiar.

To refer a blood specimen for examination to an unsupervised technician is equivalent to referring a patient from the surgical division to a nurse for complete nose and throat examination or a patient from the medical service to a student for accurate observation as to the outlines of the heart. Certainly, a nurse can spray a nose or throat adequately and a student may make a blood count which is reasonably accurate. When the clinician depends upon even a well trained technician for laboratory data he can expect results equivalent to those obtained in the instances mentioned above in the clinic. Where the physician in a hospital has on his staff a skilled neurologist he may safely refer his patient to that neurologist for an expert examination and a competent opinion. Similarly, the chief of a laboratory service when called upon for an intricate chemical examination, for an expert histological diagnosis or an important immunological test must be in a position where he can call upon a skilled worker in these fields. Only in this way can the great scope of the laboratory be properly covered.

COMMERCIALIZING THE LABORATORY AND MEDICAL PRACTICE

There has grown up, in the past few years, a development in laboratory work which, unless it be altered, cannot serve medicine other than in a harmful capacity. I refer to the private commercial laboratory. With few exceptions we see in these institutions a skilled laboratory worker who employs a variable number of more or less well trained technical assistants. Parallel with this is the instance of the surgeon, who with a

large practice employs as his assistants recent graduates and nurses to carry on the less important work. Similarly, internists with large practices often work upon the same basis. The success of organizations of this sort often depends upon support contributed by practitioners who are not too critical in regard to those to whom their patients are referred. Judgment of such organizations, whether they refer to surgery, medicine or laboratory rest upon essentially the same basis. Acceptance of results obtained from such organizations should all be tempered in the same way. The ultimate criterion in any instance is the personnel of the staff. It is no more reasonable to expect accurate and painstaking results in that laboratory where the work is done almost entirely by technicians than it is to expect a dependable diagnosis from that surgeon or that internist who employs recent graduates, nurses, technicians and orderlies on his staff.

The properly trained physician is competent to judge what examination his patient needs. He therefore can refer his patient to an adequately manned X-ray laboratory, in the same way he refers his patient to the most skilled ophthalmologist that is available. Similarly, he can find in the neighborhood an expert clinical pathologist, an expert immunologist, an expert bacteriologist, an expert biochemist. Undoubtedly, there is a field for technically trained individuals in laboratory work just as there is in clinical work, but unless the supervision be on the part of trained men the results obtained are of little significance. The clinician may employ a nurse to examine urine just as the laboratory man may employ an orderly to make culture media. In either case, the supervision is close and whenever special examinations are required they are not referred to these routine technicians.

INTERPRETING RESULTS

The interpretation of results obtained in the laboratory depends upon a considerable number of factors, including the nature and the origin of the material, associated clinical alterations, technical limitations and factors of error in the methods employed. The clinician is most competent to evaluate errors and limitations of methods in his field. Inasmuch as these all enter into the final interpretation it is safe to say that only by consultation between the clinician, with his training and viewpoint and the laboratorian with his training and viewpoint, can any adequate interpretation be made. If the clinician regards the laboratory worker as a hireling and assumes to himself all capacity for interpretation of results he falls into error because of his necessary unfamiliarity with the technical limitations of this type of work. Similarly, if the laboratory worker attempts to give final interpretations of results he falls into error because of his limitations in the intricate work of the clinic.

FURTHER DEVELOPMENT OF LABORATORY SERVICE

The growing importance of the laboratory gives rise to question as to how further development may best be directed. As a rule the laboratories of the large hospitals are well manned and adequately equipped. Nevertheless, the smaller hospitals and the practitioner without hospital connection must have laboratory consultation available. The possibilities of such consultation vary from the availability of the large hospital laboratory through various grades of competence to the laboratory directed by an individual, who through disappointment in financial return or even through incompetence fails to maintain an important hospital or university connection and establishes a private laboratory. The problem of how best to control the establishment of private laboratories by incompetent workers is ever present. The establishment of laws for examination or registration and other legal methods of regulation will probably do little of value. The solution of the problem lies in the province of education, not of the general public, but of the body of practising physicians. The laboratory occupies a position as a consulting organization and as such has no direct appeal to patients, who come rather after reference by a physician. The physician can estimate the value of a laboratory on the basis of criteria offered above. With the interest of his patient at heart and with the ever present desire of referring the patient to the best sources of information as to diagnosis, he must select his laboratory consultant with the same critical care that he selects his medical or surgical consultant. The welfare of patients and the demands for scientific accuracy of diagnosis will result in the advancement of the well conducted laboratory and by this process of natural selection lead to the abandonment of the unfit and incompetent laboratory.

CONCLUSIONS

Cooperation between the laboratory and the clinic implies mutual effort for welfare on the part of compeers in both fields. Correlation between the two necessitates opinions and results based on the ground of comparatively equal ability, training, experience and judgment. Only on the basis of cooperation and correlation of these two fields can medicine advance. Only on this principle can medicine rise above its position as an *art* and approach more nearly its desired place as an *exact science*, insofar as biology permits of precision and exactitude.

NEW AND NON-OFFICIAL REMEDIES

Ampules Ven Sterile Solution Mercury Oxy-cyanide, 0.016 Gm.—Each ampule contains 5 Cc. solution, representing 0.016 Gm. mercuric oxy-cyanide, N. N. R. Intra Products Co., Denver, Colo. (*Jour. A. M. A.*, Sept. 10, 1921, p. 863).

The Prediabetic Stage*

HENRY J. JOHN, M.D., Cleveland

Editor's Note.—Dr. John maintains that there has been a definite, recognizable prediabetic stage in every person who develops diabetes, which, being recognized admits of the prevention of diabetes. Glucose tolerance tests give us the diabetic status of the patient and determine whether the patient is a strong normal, or a prediabetic. The presence of fasting blood sugar to the amount of 125 mg. to 100 cc. and of post-absorption blood sugar of 145 mg. to 100 cc. calls for further investigation. Children, in families in which there is a diabetic history, or cases of sudden or late obesity, should be investigated by means of the glucose tolerance test. Glycosuria does not necessarily mean diabetes. It simply indicates the renal permeability to blood sugar at what may be a high or low level. Blood sugar examination is the only rational basis on which to diagnose or to treat diabetes mellitus. In normal individuals the blood sugar curve, following the administration of 100 gms. of glucose rises rapidly to its highest point in one-half hour and the decline is also rapid. A case is considered normal if the blood sugar curve returns to normal within three hours. In diabetes this rise of the tolerance curve is slow, taking from two to three hours and the decline taking from four to nine hours.

DIABETES does not develop over night. There is a stage of transition from the normal to the pathological, in which the classical picture of diabetes, as described in the text-books, is lacking; and it is this stage of transition that I designate by the term *prediabetic stage*, a stage which, although the most important in the diabetic problem, is usually unrecognized.

DETERMINING THE PREDIABETIC STAGE

How may the existence of this prediabetic stage be determined. Were we to take 100 individuals in apparently normal health, and give to each either 100 gms. of glucose by mouth, or a large meal composed mostly of carbohydrates, and make a blood sugar estimation before this meal and every hour after, what would we find? In some cases the curve which denotes the concentration of blood sugar would not rise at all, (as seen in Chart No. 4). In some there would be a slight rise at the end of the first half hour, with a rapid and permanent return to normal at the end of the first hour, (as shown in Chart No. 3). In others the rise would be quite marked at the end of the first hour, but would return to normal within three hours, (as shown in Charts Nos. 5, 11 and 12). And in still others the rise would be gradual and high, the highest point being reached at the end of one or more hours with a slow decline to normal or to the starting point, (as indicated in Charts Nos. 1, 6, 7, 9 and 10).

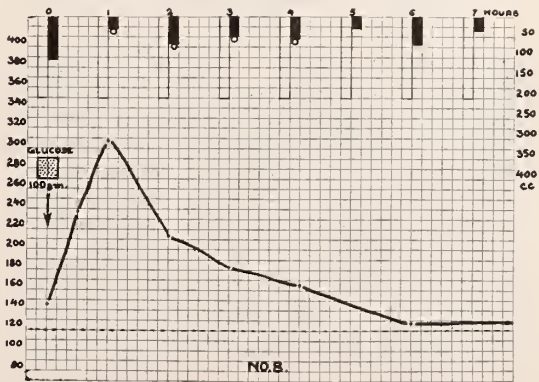
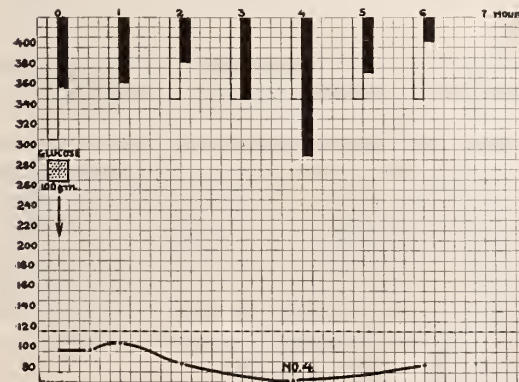
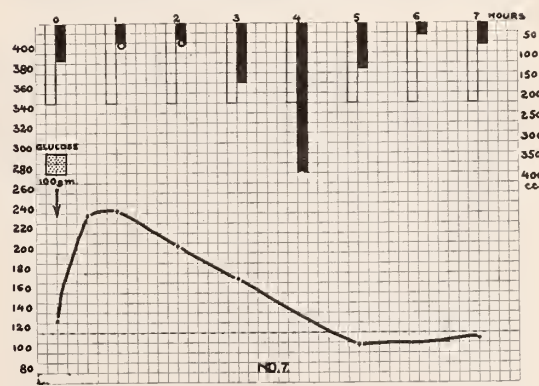
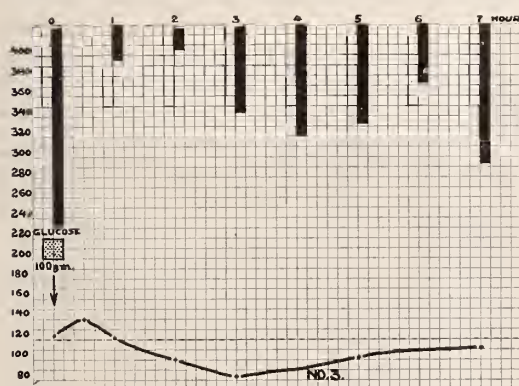
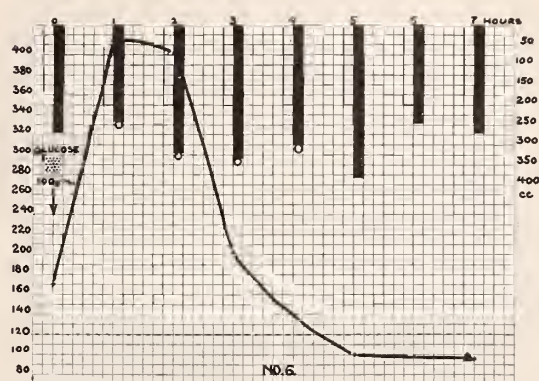
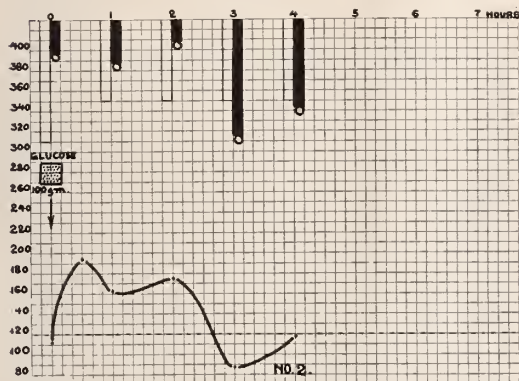
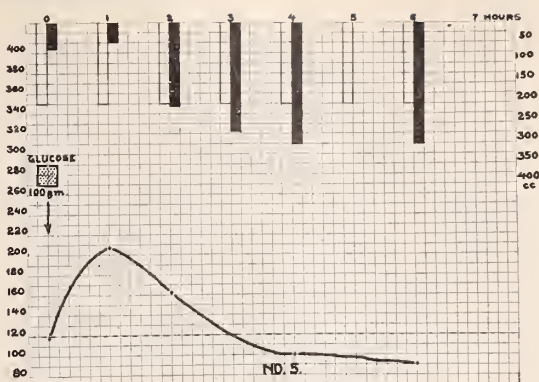
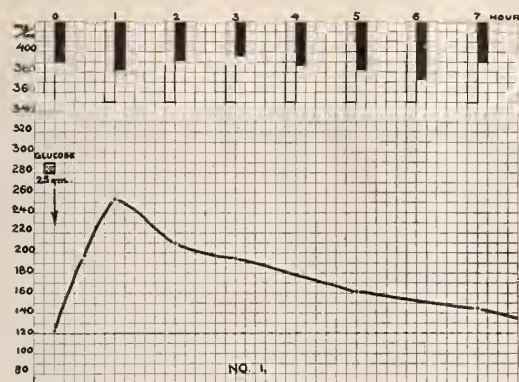
Significance of Reactions.—What is the significance of these various reactions? When there is no rise in the blood sugar curve, it means simply that the sugar is burned up, or stored, about as fast it gets into the circulation. In the *second group* of cases, with the early rise and equally early return to normal, the sugar accumulates in the blood during the first half hour, but has been taken care of and burned up or

stored by the body by the end of an hour. In the *third group*, in which the reaction is still slower—the sugar remains in the blood for a somewhat longer period before it is stored or burned—but this burning or storage is accomplished within three hours. In the *fourth group*, the utilization of sugar by the body distinctly lags. Here the body does not seem to cope with the intestinal absorption, consequently the sugar accumulates in the blood stream, but eventually it is partly burned, stored or excreted, provided no more has been added in the meantime.

No sharp dividing line can be drawn between these groups of cases. In any miscellaneous assembly of 100 individuals every stage of transition from one group to the next may appear. But among these groups the first, second, and third which we have described are generally considered as safely within the normal limits, while the fourth is definitely diabetic.

Let us discover, however, what would happen if we should continue feeding large quantities of glucose or carbohydrates to the individuals in the first three groups. In all probability those in the first group would be able to resist all possible overstuffing since their ability to burn carbohydrate is very high. The second group, also, where this ability is still comparatively unimpaired, would also no doubt resist almost any sort of feeding abuse. But how about the third group? With these, as the chart shows, the ability to burn carbohydrate is beginning to lag. This lagging can be explained on the basis that there is not enough of the internal secretion of the pancreas promptly to take care of the carbohydrate metabolism although the final disappearance of the sugar shows that the pancreas is doing all it can to cope with the situation. But strain it more, and what happens? The pancreas becomes fatigued from overwork exactly as does an overtaxed muscle, or a continually overworked stomach, until finally the point is reached where exhaustion prevents further function. *Lack of pancreas function means lack of*

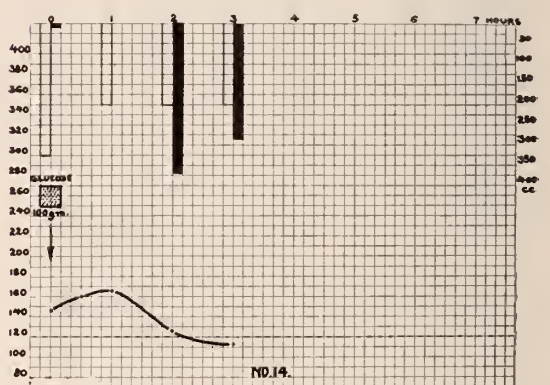
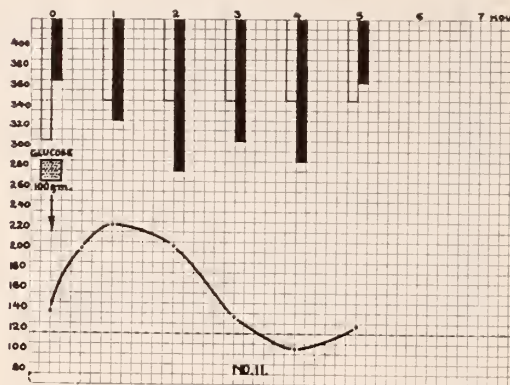
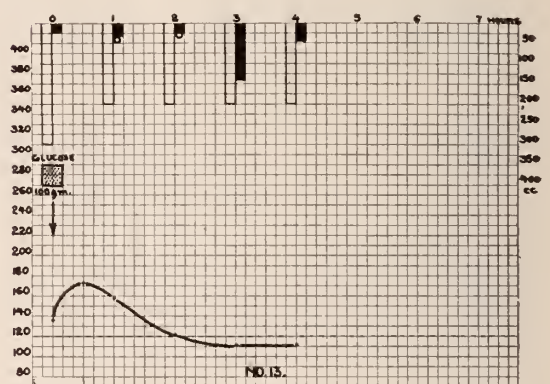
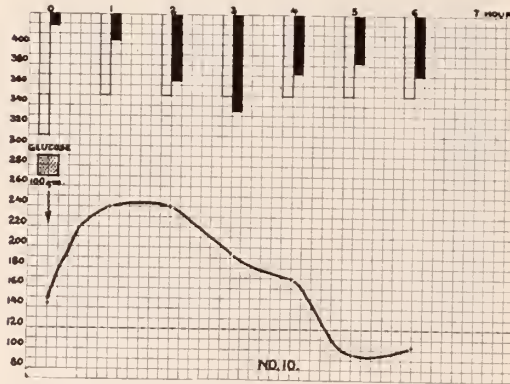
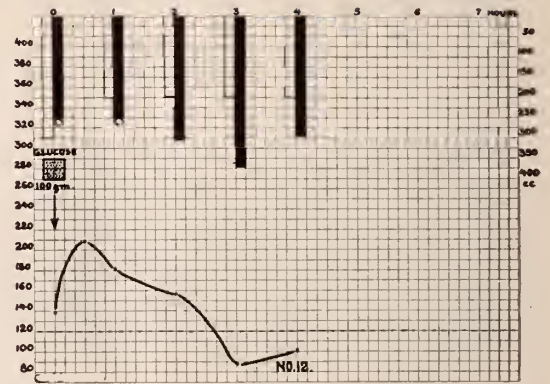
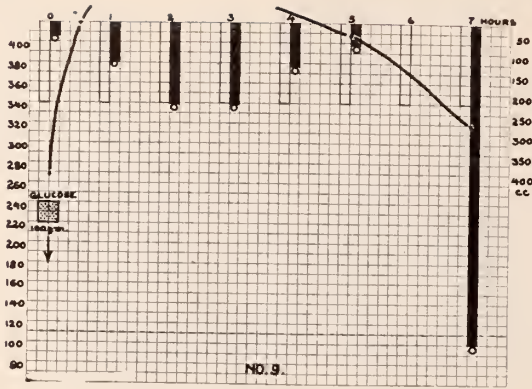
*Read before the Medical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921. From the Laboratories of the Cleveland Clinic.



EXPLANATION OF CHARTS

- Figures on left side indicate number of mgs. / 100 cc. blood.
- Figures on the right side indicate intake and output in cubic centimeters.
- Of the parallel intake and output tracing, the first

- is the intake, the second (black) the output.
- The ring at the end of the output tracing indicates sugar in urine as found by qualitative test of Benedict.
- The amount of glucose given by mouth is indicated as a strippled space at the left of the diagram.



carbohydrate utilization. Lack of carbohydrate utilization means diabetes. Thus the individual in the third of the groups already described, who is approaching group 4, crosses the line into the group composed of the hopeless diabetics.

We may consider that every case of diabetes has passed through this third stage from the status of the normal to the pathological, either because of a functional overstrain of the pancreas, such as we have just described, or because of an infection which has involved the islands of Langerhans. Thus the individual in Group 3 may be considered as predisposed to diabetes because, if that man partakes unsparingly of carbohydrate foods, sweets, pastry, etc., he will certainly in time become a diabetic; while, on the other hand, if the fact that he was approaching the

danger line were discovered in time, he could have been saved by proper precautions.

WHEN THE GLUCOSE TOLERANCE TEST IS INDICATED

It, therefore, becomes of prime importance for some basic principle to be established whereby we may judge of the probability of the presence of this prediabetic condition in our patients, so that in every case of doubt the essential precautions may be taken in time. In two groups of cases in particular a glucose tolerance test should invariably be taken.

(1) When there is a history of diabetes in the family, there is likely to be a diabetic tendency in a certain percentage of the offspring. If an individual presents a diabetic family history, therefore, the physician should make a glucose tol-

erance test to ascertain whether he is in Class 1, 2 or 3. If he is in Class 3, it is very important to keep him from going into Class 4. *This can be accomplished simply by cutting out sugar and candy from his diet, and warning him to go easy on pastry. Then, once in six months, his blood sugar should be tested, to make sure whether or not he is drifting toward the next stage, in which case more stringent dietary rules may be established. In particular, should he be the subject of any infection, the possibility that the pancreas may be involved should be borne in mind, and the blood sugar watched with particular care.*

(2) The second group of suspected cases are those individuals who suddenly begin to put on fat, for obesity of sudden development, as Joslin and Allen have pointed out, may mean diabetes. In these cases, therefore, blood sugar estimation and, if this is high, followed by the glucose tolerance test, will tell the story.

But in addition to these fairly easily distinguishable groups, many apparently normal individuals may be passing dangerously close to the diabetic line. Blood chemistry tests, therefore, are now being made as a routine procedure in all clinics and in the private offices of many internists. *In any case in which the fasting blood sugar is above 125 mg./100 cc., or the post-absorptive blood sugar above 145 mg./100 cc., a further investigation should be made. And this further investigation—the glucose tolerance test—will tell whether or not the case is one of early diabetes.*

ADVANTAGES OF DIAGNOSING THE PREDIABETIC STAGE

The diagnosis of this prediabetic stage, as I call it, means everything to the patient. To diagnose diabetes late is just like putting the fire out when the house is burned down nearly to the ground. You may put out the fire, but what have you left, and of what value is it?

While I think that we lead the world in the treatment of diabetes in our well regulated diabetic institutions, after all, do you think that a severe diabetic is happy and satisfied on his 900-1200 calories? Can he lead a normal life, hold a job or rear a family? By focussing our preventive medicine upon the prediabetic stage we may save increasing numbers from this hopelessly inefficient existence. When we stop to think that we have one million diabetics in the United States today, if we could save fifty per cent. of this number from this scourge, would it not be worth while?

GLYCOSURIA

Can we diagnose diabetes by urinary examination alone? Sugar in the urine may mean diabetes and it may not. It definitely means only one thing—permeability of the renal filter; nothing more. The presence of glycosuria is an indication for a blood sugar estimation in order to

find out at what height the renal filter is permeable. If you have glycosuria without hyperglycemia you deal with renal diabetes. If the renal filter is permeable at a high level we are likely dealing with a damaged, sclerosed kidney, and we may be dealing with either a true diabetes mellitus, or merely a physiological (artificial) hyperglycemia.

On the other hand there may be no sugar in the urine in the worst type of a diabetic, as is illustrated in Chart 1, in which the highest point of the blood sugar curve is 255 mg./100 cc. with no sugar in the urine. This chart is that of the most severe type of a diabetic (under control) in which there can not be any question as to the severity of the involvement. Chart No. 2 illustrates the antithesis of Chart 1, as it shows blood sugar of 102 mg./100 cc., a low normal, and yet there is sugar in the urine. What is the interpretation of these findings?

The first case, a severe diabetic of long standing, shows the effect of diabetes upon the kidney. To quote MacLeod (Jour. Am. Med. Assoc., Vol. lxii, No. 16, p. 1222): "The toxic effect of high blood sugar renders the kidneys less permeable to it." Were we to follow the course of a case of diabetes, the sequence of events would probably be something like the following: At first a permeability of the renal filter to the blood sugar at a certain height, which rises in time, whether treated or untreated, for Chart 1 is that of a young physician of 27 who has been under the ablest medical care since the early development of the diabetes, having been under Joslin first, and later under Allen. Thus mild cases readjust themselves by raising the renal threshold of permeability. This no doubt accounts for the fact that no sugar is found in the urine in some of these cases. Such cases as this in the past were considered as *cured* when, in reality, the renal filter was being damaged—that is, the renal permeability threshold was raised so that, as long as the patient was on a somewhat restricted diet, there was no sugar in the urine. But nevertheless, the patient's diabetes was marching on.

On the other hand, Chart 11 is that of a young business man with a highly permeable renal filter. The glucose tolerance curve is practically normal, and yet were the glycosuria accepted as a final indication, he would be judged a diabetic and treated as such. You could starve this man, restrict his diet to the utmost; but he would still show sugar in his urine. Such cases as this are frequently seen, and it becomes a matter of prime importance to judge correctly whether or not they are diabetics; and this can be determined only by a glucose tolerance test. If the sugar tolerance is low, we are dealing with diabetes mellitus.

GLUCOSE TOLERANCE

Only a decade or less ago with the development of more accurate methods for measuring

the blood sugar content, especially as developed by Benedict, has the technique and judgment of glucose tolerance tests been put upon a scientific and accurate basis.

I have already repeatedly in this paper used the term *glucose tolerance*, by which I mean the ability of the organism to tolerate or rather to burn up, to use up sugar, as it gets into the circulation. If the consumption of sugar by the body can keep up with the intake, so that it is consumed or stored almost as fast as it gets into the circulation, then we describe the case as one of a good or an increased tolerance.

On the other hand, if the body cannot store or consume the sugar as fast as it enters the circulation, then the sugar will accumulate in the blood and we have a decreased tolerance.

TECHNIQUE

In determining the degree of glucose tolerance the following technique is employed:—A patient is given on a fasting stomach 100 gm./68kg. (150 lbs.) of glucose by mouth in 200 or 300 cc. of water with an additional 200 cc. of water per hour as long as the test lasts. It is also wise to give the juice of one lemon with the glucose as the sweet solution is quite nauseating to some patients.

Urine is collected before the sugar is ingested, and hourly thereafter. The total amount is measured, and it is tested for sugar both qualitatively and quantitatively. Specimens of blood are taken before, 30 minutes after, and then hourly after the administration of glucose, until the curve has returned to the normal level.

In our clinic we use Benedict's method for the analysis of blood sugar as described in the Jour. Biol. Chem., Vol. xxxiv, No. 1, 1918. This requires only 3-5 cc. of blood for each determination, which can be taken even with a small hypodermic needle and a 5 cc. syringe. I use $\frac{1}{2}$ cc. of 20 per cent. sodium oxalate solution to 10 cc. of blood to keep this from clotting. All my determinations have been done on blood plasma, which in my estimation is better than using whole blood, as with whole blood there is more fluctuation in the sugar estimations. The colorimetric work is done with the Kober colorimeter, made by the Klett Mfg. Co., N. Y.,—a splendid and inexpensive instrument.

The quantitative, colorimetric sugar determination is done according to Benedict's method as described by him in the reference cited above. This determination, however, can be omitted in routine glucose tolerance work, as it is merely of scientific interest at present.

Just one point of warning should be made against the use of the micro-methods, such as the Kuttner-Leitz, the Epstein and others. In careful and trained hands these are accurate enough for clinical purposes; but in inexperienced hands, beginners and people who are not used to working very carefully, these methods are very inac-

curate and misleading—results varying as much as 40 per cent. Such inaccuracy defeats the object of the test, making it very misleading to the clinician.

Urinary sugar is determined qualitatively by the Benedict reagent. This method is described in any text-book and is, therefore, too well-known to need further comment.

CONCLUSIONS

(1) There has been a definite *prediabetic stage* in every person who develops diabetes.

(2) This *prediabetic stage* can be and should be recognized.

(3) If the *prediabetic stage* is recognized, the development of diabetes may be prevented.

(4) Glucose tolerance tests give us the *diabetic status* of the patient; that is, they determine whether he is a *strong normal*, or a *prediabetic*.

(5) The presence of fasting blood sugar to the amount of 125 mg. to 100 cc., and of post-absorption blood sugar to the amount of 145 mg. to 100 cc. calls for further investigation.

(6) Children in families in which there is a diabetic history, and cases of sudden, or late obesity should be investigated by means of the glucose tolerance test.

(7) Glycosuria does not necessarily mean diabetes. It plays but an insignificant role in diabetes. It indicates simply the renal permeability to blood sugar at what may be a high or a low level.

(8) Blood sugar examination is the only rational basis on which to diagnose or to treat diabetes mellitus.

(9) In normal individuals the rise of blood sugar, following the administration of 100 gms. of glucose, is quick, the highest point of the curve being reached at the end of $\frac{1}{2}$ hour, and the decline is also rapid. A case is considered normal in which the blood sugar curve returns to normal within three hours. In diabetes this rise of the tolerance curve is slow, $1\frac{1}{2}$ to 3 hours, and the decline is also slow—4 to 9 hours.

I wish to express my hearty thanks to Dr. Frederick M. Allen, under whom my original work was begun, for his scientific enthusiasm and his encouragement to us younger men; also for his kind permission to use the charts Nos. 1, 3, 4, 5, 6, 7, 8 and 9 of the series of cases which Dr. Sherrill and I did in his Institute.

NEW BOOKS

The Blood Supply to the Heart, in its anatomical and clinical aspects, by Louis Gross, M.D., C.M., Douglas Fellow in Pathology, McGill University, and Research Associate, Royal Victoria Hospital, Montreal. With an introduction by Horst Oertel, Strathecona Professor of Pathology, McGill University, Montreal. With twenty-nine full page plates and six text illustrations. Paul B. Hoeber, 67-69 East 59th St., New York, publisher. Price \$5.00 net.

When Shall We Do An Ethmoid Operation*

WM. MITHOEFER, M.D., F. A. C. S., Cincinnati

Editor's Note.—An ethmoid operation should never be done without a careful study of each individual case and during the progress of examination, which may require several weeks or months, Dr. Mithoefer believes that simple means, such as infraction of the middle turbinate, treatment of the ethmoid floor, correction of a general systemic dyscrasia or treatment of a nasal neurosis, should be tried. Frequently, by the use of such measures the patient is relieved and spared an operation. Bacteriological examination of the nasal discharge is of prime importance and neglect of this precaution may mean the death of the patient. Close analytical study brings better results in the end and prevents the operation from falling into disrepute; it also demonstrates the important fact that latent disease of the ethmoid is of frequent occurrence and may be easily overlooked if the examination is done in a cursory manner.

THE surgical technique of ethmoid surgery has improved greatly during the past decade, but unfortunately the results obtained from a radical procedure on the ethmoid labyrinth have been far from satisfactory. This state of affairs is undoubtedly due to the fact that no arbitrary rules have been laid down as to when an ethmoid operation should be done.

GENERAL CONSIDERATIONS

In the study of this problem many factors that are the cause of our failure must be considered. This requires that each patient should have a physical examination; that the age, blood, urine, eyes, teeth and tonsils should be considered; that the other accessory sinuses should be investigated; that the presence of anatomical variations of the ethmoid cells should be determined and that a bacteriological examination of the nasal discharge be made a routine of the examination. By making a systematic analysis of many cases we will be able to formulate some definite plan of procedure.

Some rhinologists seldom do an ethmoid operation and depend chiefly on the correction of a deviated septum, and the removal of hyperplastic nasal mucosa to ventilate the parts and correct the trouble. In many instances simple surgery of this kind is sufficient to effect a cure. Occasionally we meet with a rhinologist whose indications for operative measures on the ethmoid labyrinth are so bold and whose judgment is so poor that woe to the patient consulting him for an occasional headache, sneezing or post-nasal dropping and in whom the skiagram, perchance, shows a slight haziness. Such a patient is immediately operated upon and the ethmoid labyrinth is dealt with as radically as intra-nasal surgery will permit; finally after many months of after-treatment the patient is still having a post-nasal dropping, is still sneezing and has a worse headache than before the operation. It is then that the patient either gives up in despair or seeks other advice. *When the proper examination is finally made, it is found that the post-nasal discharge ceases after the correction of an*

anaemia, a thyroid insufficiency or an intestinal stasis, that the sneezing was caused by a nasal neurosis and that the headache depended on a muscular asthenopia or an old lues.

The radical operator may contend that the operative findings showed sufficient hyperplasia of the mucous membrane of the ethmoid cells to warrant an operation. This argument, however, does not hold good, for there are but few people, who will not have pathologic changes present in the ethmoid after a severe streptococcus rhinitis. Therefore, we may safely say that the presence of a slight hyperplastic change in the ethmoid labyrinth is of no significance, unless all other factors that may be the cause of the symptoms complained of by the patient have been excluded. In other words, the mere presence of hyperplasia of the ethmoid means nothing in many cases, for we have seen many patients in whom median rhinoscopy demonstrated a hyperplasia of the ethmoid floor and in whom relief was obtained with simple measures, without resorting to radical ethmoid surgery.

The results obtained by the surgeon, who makes a careful systematic examination before operating, are naturally much better than the ultimate results obtained by the indiscriminate operator. He, who makes only cursory examinations and does not weigh all the evidence in each individual case before attacking an ethmoid labyrinth, meets with many obstacles and endangers the life of the patient. Careful investigation develops surgical judgment which is more essential than being a good operator. It is our opinion that ultra-conservatism and ultra-radicalism regarding ethmoid surgery are both wrong and that the happy medium so far as the indications for operation are concerned can only be found after a most careful systematic study of each individual case.

DIAGNOSTIC POINTERS

One important fact must be remembered, namely, that the mere presence of pus in the region of the ethmoid ostia is not always an indication for operation and furthermore, that the absence of pus in the nose is not a contra-indication. It is taken for granted that no rhin-

*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

ologist ever attempts an ethmoid operation unless he has first used the various diagnostic means at his command. Space will not allow a detailed description of the various diagnostic measures employed. This phase of the subject will be dealt with in a future paper. At present it will suffice to mention the diagnostic procedures in a cursory way only.

In order to approach the subject in a practical manner it was deemed advisable to discuss the various symptoms, which, eventually, after a careful analytical study, give us our indication for or against the operation. *The most frequent symptoms met with are headache, post-nasal discharge of pus with recurrent attacks of bronchitis and occasionally asthma, post-nasal discharge of mucus without bronchitis, frequent attacks of acute rhinitis, various diseases of the eyes, vaso-motor disturbances of the nasal mucosa with sneezing and hypersecretion, and nasal obstruction from the presence of polypi or a cystic middle turbinate.*

Patients whose chief symptom is a headache require a painstaking examination before deciding on an ethmoid operation. In many cases, even after a careful examination, it is almost impossible to say that the ethmoid labyrinth is at fault. I refer chiefly to those patients in whom it is impossible after many examinations to detect the presence of pus in the nose. The conservative examiner is apt to overlook a hyperplastic ethmoiditis in such patients unless he is familiar with the method of *median rhinoscopy*. The use of this method of examination very often solves many of the difficult problems and gives us a definite indication for operation. In making this examination we have found the floor of the ethmoid labyrinth hyperplastic and studded with small polypi, we have seen a large mucocele of the bulla pressing against the uncinate process and occasionally we have demonstrated a small quantity of pus coming from the ethmoid ostia. We have records of many patients, who had suffered with chronic headaches for many years and in whom the nasal examination as ordinarily practiced was negative. Median rhinoscopy, however, revealed sufficient pathology of the ethmoid floor to justify an operation. Many of these patients had consulted other rhinologists who found nothing abnormal and advised against operation. The majority of these patients have been entirely relieved of their headaches. When relief was not obtained, it was usually possible for us to demonstrate that we failed in our endeavor on account of the anatomical variation of the ethmoid labyrinth and the presence of terminal infundibular and orbital cells, which we were unable to reach with an intra-nasal operation.

In this connection let it be said that hyperplasia of the ethmoid floor is not always a positive indication for operation. It should be considered as a factor, after all other probable causes have

been carefully weighed in the balance. *This means that before doing an operation on the ethmoid cells, it becomes necessary to consider the eyes, teeth, tonsils, nasal ganglia, urine and blood, nasal obstruction, thyroid and other endocrine disturbances, even though our examination has demonstrated pathology of the ethmoid floor. If our findings after such a systematic examination are all negative, we are then justified in advising the removal of the hyperplastic ethmoidal membranes.*

VALUE OF SKIAGRAMS

It is also of great importance to have a skiagram made of the sinuses before operation. The reason for this is quite obvious. We must ascertain the presence or absence of a frontal sinus, and also know, if possible before operation, how far the ethmoid cells extend laterally. The presence of diseased orbital cells extending half-way across the floor of the frontal sinuses makes the prognosis of the intra-nasal operation for the relief of headache and nasal suppuration less favorable in many cases. A cloudy skiagram is, in our opinion, not an indication for operation. The X-ray tells us much regarding the anatomical variations of the cells and the presence or not of a frontal sinus, but it is dispensable when it comes to the question of diagnosis. Every rhinologist should be able to diagnose accessory sinus disease without the use of the skiagram.

We have seen skiagrams with marked opacity of the various sinuses in which there was no clinical evidence of disease; we have seen others where clinically there was present every evidence of involvement but the roentgen picture was negative. So that he who jumps at a definite conclusion from the appearance of the skiagram alone is making a grave error.

INDICATIONS FOR OPERATION

Let us now consider headaches associated with nasal suppuration. In these cases a careful examination of the maxillary sinus and teeth require our attention before deciding on the ethmoid. The ethmoid operation is indicated if the inferior hiatus cells are diseased and draining into the antrum, especially if numerous tests have shown the antrum to be nothing but a reservoir for the pus from above. If the antrum and ethmoid cells are both diseased an intra-nasal antrum operation is also indicated at the time of the ethmoid operation. If the presence of polypi is the chief indication for ethmoid surgery, it may also be necessary to deal radically with the antrum, in order to destroy the mother bed of the polypi, which is so often found in the antrum.

It is a safe rule never to operate in the presence of large quantities of pus unless the patient has been observed for some time and a bacteriological examination of the nasal discharge has been made. The presence in the nose

of the streptococcus hemolyticus is a contra-indication for operation, unless urgent symptoms such as orbital or intra-cranial complications are present. *Nasal operations undertaken in the course of an acute infection are rarely indicated but if necessity demands an operative procedure at this time, it is far better to do a very radical operation in order to establish free drainage of all cavities.* An ethmoid operation is also indicated as the first step for the cure of a chronic frontal sinus suppuration. It is rarely that the frontal sinus alone is affected; the ethmoid cells, especially on the floor of the frontal or the terminal infundibular cells, are often the means of keeping up a suppuration in the frontal.

A small amount of pus coming from the ethmoid, in the absence of headaches and other systemic disturbances, is in our mind no indication for operation. It has been the experience of every operator that no matter how thorough the intra-nasal ethmoid operation, the truth remains that there is still liable to be pus present after operation. This is accounted for by the presence of infundibular and orbital cells. Some of our intractable cases were not relieved until we performed an external ethmoid operation.

One might be tempted to operate however, in the presence of a small quantity of pus coming from the ethmoid when the middle turbinate is displaced laterally and repeated examinations showed pus coming from the anterior cells, when puncture of the bulla revealed pus and if in doing the operation the middle turbinate would not be sacrificed.

Thus far we have considered two of the most important symptoms of ethmoiditis—headache and suppuration—and it can readily be seen that we have had good reasons for advising an operation. There are, however, many mild degrees of ethmoiditis in which an operation is not indicated. Some patients give a history of repeated colds, super-induced by the presence of a nasal obstruction in the form of a deviation of the septum and turbinate hypertrophy. In many of these cases the establishment of proper ventilation, by correcting the deviation or removing the hypertrophy, will be sufficient to give relief. In other cases a subthyroidism may be the cause of the infiltrated mucosa or there may be an anaemia or intestinal stasis to overcome. We have seen many cases in which there was present only slight pathological evidence of ethmoid disease and in which the headache was relieved by infracting the middle turbinate, thereby relieving the pressure from the lateral wall and ventilating the frontal sinus—so called *vacuum headaches*.

We do not consider post-nasal discharge of mucus alone as an indication for the operation. There are so many other more important causes for this distressing symptom. The ethmoid labyrinth must only be thought of as a causative

agent after all other factors have received due consideration.

We must also hesitate for some time before deciding to operate on a case in which sneezing, lachrymation and hypersecretion are the chief symptoms complained of by the patient. It is true these cases very often have an associated hyperplastic ethmoiditis but nevertheless, the fact remains that at the bottom of the whole disturbance lies a nasal neurosis. The sensibility of the mucous membrane of the nose in the region of the anterior ethmoid and sphenopalatine nerves must be tested and proper treatment instituted for the relief of the neurosis before attempting any surgery of the ethmoid cells. This principle holds good even though slight pathologic changes indicative of a hyperplastic ethmoiditis are present. Patients with a typical nasal neurosis syndrome are very seldom relieved by operating upon the ethmoid and the same symptoms of sneezing, hypersecretion and headache persist unless the nasal neurosis is properly cared for.

DISEASES OF THE EYE AND ETHMOID OPERATIONS

Before concluding a few words must be said concerning diseases of the eye and the ethmoid operation. Eye changes from an ethmoiditis are numerous. Disturbances of vision may be from circulatory changes or the result of toxæmia. There may be an enlarged bulla, a suppuration of the posterior group of cells or the mere closure of the sphenoidal ostium with circulatory changes within the sphenoid cavity causing a pressure on the sheath of the optic nerve. Many cases of muscular asthenopia and dacryocystitis do not improve until after the ethmoid operation. Optic neuritis, of course, requires an ethmoid operation, after all other factors have been excluded, even though there is no evidence of ethmoid disease.

SUMMARY

To summarize briefly:

1. The ethmoid operation should never be done without a careful study of each individual case.
2. During the progress of examination, which may require several weeks or months, simple means, such as infracture of the middle turbinate, treatment of the ethmoid floor, correction of a general systemic dyscrasia or treatment of a nasal neurosis, should be tried.
3. By the use of these simple means the patient is often relieved and operative intervention is not required.
4. Bacteriological examination of the nasal discharge is of prime importance. Neglect of this precaution may mean the death of the patient.
5. Close analytical study brings better results in the end and prevents the operation from falling into disrepute; it also demonstrates the important fact that latent disease of the ethmoid is of frequent occurrence and may be easily over-

looked if the examination is done in a cursory manner.

19 WEST SEVENTH STREET.

DISCUSSION

Dr. Myron T. Metzenbaum, (Cleveland):—When shall we do an ethmoid operation? Dr. Mithoefer's paper has brought out in detail the many pertinent indications for opening the ethmoid labyrinth. To my mind the indications for an ethmoid operation may be divided into three classes:—

1. When there is a definite involvement of one or more cells of the ethmoid labyrinth with insufficient drainage. The general symptoms in this class may be headaches, low or septic temperature, pain at the site of the lacrimal bone; in severe cases, there may be edema of the lower lid. If there is necrosis of the orbital walls of the ethmoid cells with inflammatory swelling and suppurations, there may be an exophthalmus. If the posterior ethmoid cells are involved, there may be slight or severe involvement of the optic nerve. In these cases an examination of the nares reveals an irritated mucous membrane, an inflamed middle turbinate, the nares is usually filled with muco-pus. If the middle turbinate is contracted with cocaine-adrenalin, free pus can usually be seen between the middle turbinate and the lateral wall. Trans-illumination and the X-ray of the ethmoid labyrinth show a variation from the normal.

To give relief to this class of cases it is necessary to establish sufficient drainage. This may

be accomplished by removing the anterior portion of the middle turbinate alone, or by extirpating the entire middle turbinate, or by opening the bulla ethmoidalis. In cases where the optic nerve is involved, because of its close relation to the post-ethmoid cell, and the sphenoid, it will necessitate the opening of both cells.

2. The second class of cases in which the ethmoid operation is indicated are those in which there is an infection of the sphenoid sinus posteriorly or, as Dr. Mithoefer has mentioned, of the antrum below, which is maintained by a reinfection from the ethmoid labyrinth.

3. The third clinical class consists of those cases which Dr. Mithoefer has emphasized, *namely*, cases showing no evidences of any infection in the ethmoid labyrinth or in other nasal accessory sinuses and showing no other focal infection and no systemic involvement. These patients suffer from headaches with an acute or chronic involvement of the optic nerve.

The close relationship of the optic nerve to the post-ethmoid cell and sphenoid will necessitate the exploration of both. These cells may not contain pus, but may be only acutely or chronically inflamed resulting in a hyperplasia sufficient to cause pressure upon the nerve sheath. The opening of the cells usually arrests and may prevent chronic involvement of the optic nerve.

One of the most important points in Dr. Mithoefer's paper is the emphasis of the necessity for a complete physical and laboratory examination of every patient before being submitted to an operation, so as to eliminate other focal infections and toxæmias coming from the kidneys, intestines and thyroid.

The Use of Radium in General Surgical Conditions with Special Reference to Uterine Conditions*

L. G. BOWERS, M.D., and E. R. ARN, M.D., Dayton

Editor's Note.—After two years' experience with radium Drs. Bowers and Arn consider it the ideal treatment for all forms of skin cancer. In addition radium rays and dosage can be better applied than X-ray in persistent thymus with equal or superior results. So far radium treatment of cancer of the alimentary tract has been unsatisfactory. On the contrary radium has solved the difficult problem of intractable hemorrhage of the young and non-malignant hemorrhage at the menopause. Drs. Bowers and Arn have also found radium a great adjunct to surgery in operable (?) cases and a most dependable palliative in advanced cases. They even intimate in quoting Titus that radium "may remove cancer from the domain of surgery."

THE authors of this paper are not offering a compilation of the literature of radium therapy for your consideration, but the results of their experience during two years with an adequate supply of radium, *viz.* 272.6 mg. We realize that the time is somewhat short to judge the future of many of these cases, but we hope that our experience and results, together with their discussion, will be of some assistance to radium users.

RADIUM IN SKIN LESIONS

Radium seems to be a specific for most cases of so-called skin cancer or epithelioma. The original growth is treated usually by the plaque and the draining lymphatic glands by lightly

filtered X-ray. Great care should be used in cases that have had previous X-ray exposures as the danger of radium burns is greatly influenced by such previous treatment. Skin cancer engrafted on syphilitic ulcerations or gunnata do not respond to radium therapy as well as those of simple epitheliomatous type, even though the patients have had adequate antiluetic treatment.

The results in angioma of the cavernous type have been most gratifying, especially in young children. We have usually used the plaque over the growth and inbedded the steel needles in or around the growth, care being taken not to rupture any of the vessels. The hemorrhage is not only hard to control, but the effect of radium rays seems to be lessened should this complication occur. The scars resulting from the treatment are trivial and in many cases can scarcely be seen after six or eight months.

*Read before the Surgical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

RADIUM AND ENLARGED THYMUS

Radium is the ideal treatment for cases of persistent or enlarged thymus, as dosage, screening and ease of application are essential factors in treating children. One treatment, using only gamma rays, applied to four separate surfaces, is usually sufficient. Roentgenograms before and after treatment attest its efficacy.

SARCOMA

In sarcoma, the giant cell type responds better than the round or spindle cell type. The melanotic type does not seem to respond to radium treatment and unfortunately these cases usually come to the surgeon after metastasis has occurred.

INFLUENCE ON VARIOUS CARCINOMATA

Carcinomata of the gastro-intestinal tract, from mouth to anus, respond very poorly to radium *alone*. Carcinoma of the buccal cavity should be thoroughly cauterized by a slow heat cautery, followed by radium applications in few days.

Carcinoma of the stomach and intestine, because of its situation should always be treated surgically with either pre- or post-operative application of radium.

Carcinoma of the rectum, especially at the muco-cutaneous junction, responds well if large dosage is used, *viz.* 6,000 to 10,000 millicurie hours. Growths higher up in the rectum, if seen early, have been given a radium application before surgical removal and one post-operative application, followed by deep X-ray therapy through the back. Obstruction frequently develops following radium application in the rectum, but we feel that this can usually be avoided by proper screening. Growths occurring at the recto-sigmoid junction are best treated by preliminary colostomy. We usually use 100 mg. in silver, brass and rubber for 24 hours. The pain and hemorrhage is usually relieved by the first application. If proctitis develops chlorotone in olive oil will usually give relief.

In carcinoma of the breast, we have limited the use of radium to pre- and post-operative applications in conjunction with the X-ray; and to post-operative recurrences if the roentgenogram does not reveal any chest or other metastasis. We always use 50 mg. well screened in the axilla for 12 hours about the 7th post-operative day. Following this technique, we have seen only two recurrences in the past two years. Post-operative recurrences require massive doses, well screened, to be of any value, from 10,000 to 12,000 millicurie hours.

UTERINE CONDITIONS AND FIBROIDS

Uterine conditions present the ideal field for radium treatment and we have marveled at many of our results. Menorrhagias at puberty, when all other causes for this condition have been ex-

cluded, are treated by small doses,—25 mg. for three or four hours. One dose usually suffices and the normal period is established after three months.

Menorrhagia occurring at the menopause, when non-malignant in nature, and the adenexa are free from infection, responds to radium. Many patients are saved from hysterectomy by the conservative use of radium. Fifty mg. with the usual screening for 24 hours will usually stop the hemorrhage and establish the menopause.

Considerable discussion has arisen about the radium treatment of uterine fibroids. We feel that in women under 35 years of age, in the child-bearing period, myomectomy, when possible, is the operation of choice. Should heart, kidney, thyroid or any constitutional disease contraindicate operation, radium should be used, in such manner as not to stop the menses. This is possible by using small doses,—300 to 400 millicurie hours, and repeating according to indication elicited by repeated examinations.

For fibroids occurring past 35, if of intra-mural type and not larger in size than a four months pregnancy, and the adenexa are free from infection, radium is the ideal treatment. Scraping from the uterus, in this group of cases as well as in hemorrhages of non-malignant type occurring at the menopause, should be taken for microscopical study when the radium is applied.

The sub-peritoneal fibroid with pedicle does not respond readily to radium, because of its distance from the uterine canal, which is the usual site of application.

Polypi should be removed surgically and radium applied at the time of removal, if the uterus is enlarged or other growths are present in its musculature.

CANCER OF THE CERVIX

In all cases of cancer of the cervix applying for treatment, we have followed the Schmidt classification which is as follows:

1. Operable carcinoma.
2. Inoperable—Made operable by radium.
3. Inoperable—Radium only.
4. Inoperable—No treatment.
5. Post-operative recurrences.

Class 1—Operable Carcinoma.—The few cases seen of this class have been given a full dose of radium—100 mg. for 24 hours, 4 days previous to complete hysterectomy, conserving when possible one or both ovaries, either in their natural position or by transplantation of one, or a part of one, to the space of Retzius. Crile has shown that cancer of the cervix rarely, if ever, metastasizes to the ovary. At the end of 14 days, a 50 mg. dose for 12 hours is given to the vault of the vagina, followed by 6 to 8 X-ray treatments, through the back, at intervals of 2 to 3 weeks. The few cases seen in this class, regardless of type of cancer, have remained well to date, showing the desirability of early diagnosis.

Class 2—Inoperable Carcinoma Made Operable by Radium.—We have not subjected any cases of this class to operation, feeling content to leave them alone when the process seemed arrested and the cervix was healed. All were given deep X-ray therapy in addition to radium. We had the privilege of examining sections from one of our cases of this class that was operated in other hands. The sections showed that carcinoma cells were still present but most of them were in isolated islands, well surrounded by layers of fibrous connective tissue, and we do not feel that this connective tissue barrier should be broken down when once it is established. The cancer cells showed degeneration of their protoplasm and the nuclei were fairly free from mitosis.

Class 3—Inoperable Carcinoma of the Cervix.—We have had several pleasant experiences in this class. We have seen the local growth disappear, the hemorrhage stopped, the pain relieved, the uterus become partially movable and the patient lose her cachexia and gain in weight. Of course some cases of this class only have their discharge and hemorrhage stopped, the pain lessened, and no doubt life prolonged, but the inevitable metastasis continues and quickly takes life. Many, however, seem to have taken a new lease on life and seem to be well. Of course, the five year test may show a different outcome.

Class 4—Inoperable—No Treatment.—As regards the terminal stages of disease, no comment is necessary, for morphia is the only humane treatment.

Class 5—Post-Operative Recurrences.—We have seen only a few cases of this class. If recurrence is limited to anterior vaginal wall, the results of radium treatment have been good to date.

PREPARATION AND AFTER CARE

The preparation for treatment and the after-care, of patients of the uterine group, are important and our routine is as follows:

1. Complete physical examination, including blood count, a Wassermann test and urinalysis.
2. Alkalinization and abundant quantity of water during the previous 24 hours.
3. Bowels are thoroughly emptied by a Watkins' enema.
4. Transfusion of blood if the hemorrhage index is below 60. We feel that this greatly enhances the prospects of recovery.
5. Gas-oxygen anesthesia.
6. Adequate amount of morphia for pain during treatment.
7. Bladder is emptied at frequent intervals to prevent irritation by radium.
8. Re-examination every 4 to 6 weeks in cancer cases, every 8 weeks in fibroid cases, with record of weight.

METHODS OF USING RADIUM

In all these cases we have used the radium salt as enclosed in glass and screened by silver, brass and pure gum rubber.

In fibroid cases and menorrhagias at puberty and the menopause, the applications have always been intra-uterine; the duration of the exposure and amount of radium depending upon the existing condition and *age*, which is a very important factor. In the young, 200 to 400 millicurie hours are usually sufficient and is the dosage which is just short of producing amenorrhea. The nearer the age approaches 38 to 40 years, the greater the number of millicurie hours required. If amenorrhea is to be produced 1,200 to 2,400 millicurie hours are given.

In cancer cases the production of amenorrhea is unimportant as compared to destruction of the growth. Our usual technique is the application of 100 mg. (25 mg. intra-uterine and 75 mg. intra-cervical) for 24 to 30 hours; reapplied in 6 to 8 weeks depending upon the local result. Never more than three treatments are given. We believe the first dose should be large for the fibrosis resulting from the use of radium prevents penetration to some extent in subsequent treatments.

In one group of cancer cases, we used 50 mg. for 12 hours daily for five days, but our results were not as good as in 24 to 30 hour applications of 100 mg.

In post-operative recurrences on anterior or posterior vaginal wall, we found that we could best hold the radium in contact by means of a roll of gauze of a size and shape depending upon the size and shape of the vagina. If on the anterior or posterior wall, the radium was strapped to the corresponding side of the gauze, if at the vault, it was attached to the end. We have had no experience with the use of dental wax for the same purpose.

Carcinoma of the body of the uterus has responded so well to surgery in the past, that total hysterectomy is the procedure of choice, with pre- and post-operative radiation.

We usually balloon the vagina with gauze to keep the rectum and bladder at a distance.

POST OPERATIVE COMPLICATIONS

Post-operative complications should perhaps be briefly discussed:—

(a) Nausea and vomiting were present more often in the menorrhagia cases and also in fibroid cases than in cancer cases. It seemed to be more severe in those patients who were very sensitive to protein as usually elicited by their history. Glucose and soda solution, by rectum, seemed to give the greatest relief in this group.

(b) Fever was present in about 20 per cent. of all uterine cases, varying from one to three or four degrees. The patients sensitive to protein gave the higher temperatures.

(c) Severe leucorrhœas, reported by some observers, have not been present in our series of cases.

(d) Vesico-vaginal and recto-vaginal fistulas have occurred three times in our series, all in Group III cases. Two occurred three months after treatment and one a year after treatment. The two former have succumbed from their cancer while the latter is living and seems to be free from cancer.

RESULTS

While we realize that the time is too short for any final estimate of our results, we feel that this preliminary report on the condition of the following cases from six months to two years after treatment is of value:—

Fifty cases of carcinoma of the cervix of Class III, the inoperable type, show the following results: 6 are dead; 4 are retarded, with life no doubt prolonged and with hemorrhage and discharge stopped or lessened; 37 are to all local appearances, completely healed, the patients having gained in weight, improved in color, and happy; and 3 have not reported.

Thirty uterine fibroids have completely recovered.

Ten menorrhagias gave uniformly satisfactory results.

Five uterine polyps after surgical removal and radium application have remained well.

One hydatidiform mole was to all appearances well after five months.

Twenty-two malignant growths of the buccal cavity were treated with not more than 15 per cent. showing lasting benefit.

Two cases of myelogenous leukaemia were treated with marked benefit. In one the leucocyte count dropped from 250,000 to 25,000 in ten days and to 10,000 in three weeks. Eleven months after treatment, the leucocyte count was 20,000 and the spleen less than one-half its original size. In the other case the leucocyte count dropped from 135,000 to 11,500 in seven weeks and eight months after treatment was still 10,400. Both cases have gained in weight and are apparently doing well.

CONCLUSIONS

1. Radium is the ideal treatment for all forms of skin cancer.

2. In persistent thymus,—radium rays and dosage can be better applied than X-ray, with equal or superior results.

3. Radium treatment of cancer of the alimentary tract has been unsatisfactory.

4. Radium has solved a difficult problem in intractable hemorrhage of the young and in non-malignant hemorrhage at the menopause.

5. Radium is a great adjunct to surgery in operable (?) cases and a most dependable palliative in advanced cases. What might it not do alone in operable cases, if we may judge by its palliative results?

"It may remove cancer from the domain of surgery."—Titus.

Pre-Operative and Post-Operative Radium Therapy: Report of Cases, Dosage and Methods*

BEN R. KIRKENDALL, M.D., Columbus

Editor's Note.—After an experience of four years' use of radium on 817 patients, Dr. Kirkendall concludes that cases of carcinoma of the vagina and prostate are best treated with radium alone. Cases of cancer of the cervix and uterus, which have responded well to the treatment, should rarely be hysterectomized later, as distant, quiescent diseased cells may be stimulated to recurrence. Radium can be used to great advantage before surgery to make non-surgical cases operable. Radium after surgery may make a success of the operation. Its use in recurrences is usually palliative but it may cure.

DURING the four years ending January 1, 1921, I treated a total of 817 patients with radium. Of this number, 248 were treated directly after surgery; 108 cases were patients with recurrence after a previous surgical operation, while 18 cases were first treated with radium and subsequently several months later were operated upon. Four patients were treated directly before an operation, in order to make operation possible, while five had pre-operative therapy, *i.e.* they were treated immediately before, and directly after operations. Of this total of 383 patients treated in con-

junction with surgery, only a part of them are studied in this paper.

CANCER OF THE MOUTH

In the series of 817 cases, 53 were cancer of the mouth, 14 of these were treated after surgery, which generally consisted of burning the growth with actual cautery under slow heat, and the extraction of bad teeth. Practically all patients having cancer of the mouth have filthy mouths, with decayed and ragged teeth, all of which generally need extraction. Two additional cases had post-operative recurrences before treatment; one case required surgery later; 2 of these had metastases. In this total number, my records show that 30 are still living; 6 are un-

*Read before the Surgical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

improved; 13 improved for three months; 7 for six months; 4 for nine months; 3 for one year or longer. There are 2 free from disease for six months; 5 for one year; 3 for one year and a half; 1 for two years; 3 for two and one half years; and one for three and one-half years; 3 for two and one-half years; and 1 for three and one-half years; 4 abandoned treatment; 1 is untraced; and 2 are partially traced. 3 died in three months; 2 in six months; 6 in one year; 1 in one and one-half years; and 1 in two years.

CANCER OF THE RECTUM

Twenty-two (22) have been treated; 10 are dead, plus 3 who are untraced; 2 are partially traced; 6 post-operative cases; 3 had recurrences before radium was used; 1 was operated subsequently. There were 3 of this total who were not improved; 7 improved for three months; 3 for six months; 1 for one year or longer; 1 has remained free from disease for nine months; 1 for one year; one for one and one-half years; 2 for two years; 1 abandoned treatment; 2 died in three months; 5 in six months; 2 in nine months; and 1 in one and one-half years; 9 of these 22 patients are living. These patients seemed to do better if a colostomy was performed first, as this side-tracks the irritating feces and minimizes the radium irritation.

CANCER OF THE CERVIX, UTERUS AND ADNEXA

An attempt has been made to divide cancer of the cervix, uterus and adnexa into two classes: *namely*: (1) cancer of the cervix and (2) cancer of the uterus. Obviously, where the cervix and uterus have appeared to be involved, they were classed under cancer of the uterus, using this classification and admitting that it has been rather hard work to pick out cases in which the cervix was alone involved. There are 56 cases of cancer of the cervix to report; 29 of these were operated upon immediately preceding radium treatment. Plunkers' iron or *Percy cautery* was practically always the surgical procedure. Of this number, 3 were unimproved; 8 improved for three months; 5 for six months; 6 for nine months; 3 for one year or longer; 4 are free from disease for three months; 2 for six months; 4 for nine months; 6 for one year; 4 for one and one-half years; 2 for two years; 5 for two and one-half years; 1 for three years; 1 for three and one-half years; 1 for four years; 1 abandoned treatment; 2 had metastases; 4 died from intercurrent disease; 2 post-operative recurrence before treatment; 1 had a subsequent recurrence; 1 was treated pre-operatively; 2 died within three months; 4 in six months; 2 in nine months; 3 in one year; 1 in one and one-half years; 1 in two years; 1 in three years. *There are 42 out of the 56 patients living. This is obviously a high record of improvement and seeming cures, and tends to show what has been previously claimed by other radium workers,*

that cancer of the cervix responds exceedingly well to this treatment.

Of 3, who were first treated with radium, and months later had a hysterectomy, 1 died of recurrence; and 2 are still living.

CANCER OF THE UTERUS

In cancer of the uterus, an attempt was made to benefit some cases which were absolutely hopeless or apparently so, for the reason that we did get benefits in a few instances, as they came for radium as a last hope and resort, and none were turned down, if they wished to take the last chance which was offered; so 124 cases were treated and of these 10 were unimproved; 36 were improved for three months; 15 for six months; 5 for nine months; 9 for one year or longer; 3 for three months were free from disease; 6 for five months; 3 for nine months; 7 for one year; 4 for one and one-half years; 4 for two years; 1 for two and one-half years; 4 for three years; 4 for three and one-half years; 5 for four years; 4 abandoned treatment; 5 were totally untraced; 8 partially traced; 7 had metastases; 65, over half, were post-operative radium cases,—*i. e.*, radium was used directly after surgery; 20 additional cases had been operated previously; 3 were submitted to surgery months after radium therapy; 3 had subsequent recurrences; 1 was treated before operation; 11 died in three months; 14 died in six months; 15 died in nine months; 10 in one year; 5 died in one and one-half years; 3 in two years; 1 in two and one-half years; 1 in three years; 59 are living, or a percentage of 48 per cent.

It must be understood, however, that this percentage is much too high for final report on these cases; for many of them, as is true of other cases in this report, have been treated quite recently.

Of 24 patients, who had hysterectomy and then radium, 14 are living, while 10 are dead from recurrences.

Of 10 patients, who had recurrences before radium was used, all died except one.

Of 5 other cases of cancer of the uterus, all died in the hospital while undergoing their first treatment; 2 from Bright's disease; 1 from embolism; 1 from anaemia and radium shock; and one from intestinal obstruction.

Many radium therapists claim better results in cancer of the cervix and uterus, by using radium only. My records show that the use of the cautery before treatment is better. Fibroids undergoing malignancy, malignant endometritis, and cases in which there is extreme involvement of the adnexa are not submitted to the cauterization.

BLADDER CARCINOMA

The radium results in bladder carcinoma have been rather disappointing as far as seeming cures are concerned. In all 17 cases have been treated; 12 of these directly after surgery,—*i. e.*

	Improved up to					Apparently free from disease for										Died within																					
	Unimproved	3 months	6 months	9 months	1 yr. or more	3 months	6 months	9 months	1 year	1½ years	2 years	2½ years	3 years	3½ years	4 years	Abandoned treatment	Totally untraced	Partially traced	Metastases	Died from other disease	Post-operative radium cases	Post-operative recurrences	Subsequent recurrences	Pre-operative radium	Pre- and post-operative radium	Operated month after radium	3 months	6 months	9 months	1 year	1½ years	2 years	2½ years	3 years	Total treated	Total dead	Living
Mouth.....	6	13	7	4	3		2		5	3	1	3		1		4	1	12	2		14	12				1	6	12	6	6	1	1			53	22	36
Rectum.....	3	7	3		1				1	1	1	2				1	3				6	3				1	2	5	2			1	1		22	10	9
Cervix Uteri.....	3	8	5	6	3	4	2		4	6	4	2	5	1	1	4	5	8	12	4	29	12	1	1		11	14	15	10	5	3			1	56	14	42
Uterus.....	10	36	15	5	9	3	5	3	7	4	4	4	1	4	4	5	4	1	1	12	65	20	3	1		3	11	14	15	10	5	1	1		124	60	59
Bladder.....	5	4	2	1						3	1					1				1	12	12				2	6	5	1	1	1			17	13	4	
Malignant Kidney.....	2	12															2		1	1	5	5				2	2	2						6	4	0	
Prostrate.....	2	7	3	1	1	1	2						1				1	1		1	7	12				2	4	1	3	1				19	11	8	
Ovary.....	1	1	1	1	2	1	1			1							4	1		12	12		1			2	2			1	1	1			12	2	6
Vagina.....	1	7	1	1					5								1			2	3	6	4			2	2	2		1					17	7	9
Colon.....				2															1		3														3	1	2

N. B. The untraced and the dead have been subtracted from the number treated to obtain the number living.

through a cystotomy wound, and nearly always after the cancer has been burned by cautery; 13 are dead and only 4 are living. Five were unimproved, or improved for only a few weeks. 4 were improved for 3 months; 2 for six months; 1 for nine months; 3 for one and one-half years, were apparently free from disease; 1 of these suffered recurrence and then died recently; 1 appeared free from disease for two years; and 1 for four years; 2 had post-operative recurrence before radium was used; 6 died in three months; 5 in six months; 1 in nine months; 1 in one and one-half years; 1 in a little over one and one-half years.

KIDNEY CASES

Six malignant kidney cases were treated, of which 3 were hypernephroma; 1 a carcinoma, and 1 a tubercular adenoma. All but one were post-operative cases; this one was treated without surgery, and without a microscopical diagnosis, of these 4 are dead; 2 unimproved; 2 improved for three months; 2 are totally untraced and probably dead.

CANCER OF THE PROSTATE

I treated 19 cases of cancer of the prostate; 7 were post-operative cases; 1 died from pulmonary embolism while under treatment; he was not operated upon, but the introduction of a radium carrying catheter set up bleeding in the posterior channel, which was probably the cause of the embolism; 2 were unimproved; 7 improved for three months; 3 for six months; 1 for nine months; and 1 for one year or longer; 1 is free from disease for six months; 2 for nine months; 1 for three years; 1 totally untraced; 1 partially traced; 1 died in three months; 4 in six months; 1 in nine months; 3 in one year; 1 in one and one-half years; and 8 are living.

CANCER OF THE OVARY

Radium was used in 12 cases of cancer of the

ovary, (malignant papilloma being included). All were operated previously to treatment; 2 are known to be dead; 4 are untraced; 1 was unimproved; 2 improved for three months; 1 for six months; 1 for nine months; 2 for one year or longer; 1 free from disease for 3 months; 1 for six months; 1 for one and one-half years; 1 required a subsequent operation and retreatment, and is still living a year after her operation.

CANCER OF THE VAGINA

Seventeen cases of cancer of the vagina were treated; 3 were treated directly after operation; 6 additional cases had post-operative recurrences before treatment began; 1 was unimproved; 7 improved for three months; 1 for six months; 1 for nine months; five are free from disease for one year; 1 for two years; 1 was untraced; 1 partially traced; 2 died from intercurrent disease; 4 had subsequent recurrence; 2 died in three months; 2 in six months; 2 in nine months; 1 in one and one-half years; 1 of these cases entirely recovered from cancer of the vagina and remained cured for two years; only to develop in the last year cancer of the breast, induced by the kick of a cow ten years before. An incomplete breast operation was followed by recurrence, before she left the attending surgeon's hospital. The latter trouble was treated, but was only helped temporarily as she died six months later.

A patient who weighed 300 pounds was subjected to dilatation of the vagina and excision of a portion of tissue for examination. Radium was immediately inserted, but was followed by death in 24 hours after its removal, probably due to fatty degeneration of the heart.

CANCER OF THE COLON

Three cases of cancer of the colon were treated with radium, all post-operatively; in 2 cases the offending mass was pulled outside of the wound,

making the application of the radium very easy and efficacious. One has been well for two years; 2 improved for nine months; 1 of these is still improving, and may get a cure; 1 died in one year from metastases in the abdomen around the bladder.

We instruct nearly all patients treated, to return in about four weeks for inspection and other treatment, if necessary. This helps to account for the follow-up reports.

DOSAGE IN GROUP CASES

An attempt to give the dosage of group cases is necessarily general in type. To a certain extent, each individual case is a problem in itself. Experience and results obtained in other like cases helps materially in judging the dosage.

Cancer of the Cervix and Uterus.—The doses of radium which have been used in cases of cancer of the cervix and uterus are almost identical. We try to give within a week's time, three applications of radium into the cervix, using 50 or 100 milligrams of radium at one time, with 8/10 millimeter brass screen and black rubber covering, for a total dosage of 3,500 or 3,600 milligram hours,—i. e. the application is made over night, every other day, preceded by a soap suds enema to help prevent a proctitis and keeping the bladder empty with a catheter if necessary, to prevent cystitis from the irritating effects of the radium. One of the early cases of cancer of the cervix and uterus had multiple metastases in the abdomen. These metastases were visible throughout the abdominal wall, and had the appearance of walnuts in a sack, the patient being a thin individual. This patient recovered and is well today, over three years after treatment. This treatment consisted of covering the abdomen with checker board squares and applying a 50 milligram pack to each area, for four hours. Two-25 milligram tubes being used one half inch apart, screened with brass and one layer of rubber. As these metastases disappeared after this treatment, we have treated all cases of cancer of the cervix and uterus with a like treatment, crossing the lower section of the abdomen in the checker board manner. Sometimes using a 75 to 100 milligram pack, with more rubber and gauze screen to help prevent the blisters which usually follow such a procedure.

Cases of cancer of the rectum are generally given one or two twelve hour doses, with 50 milligrams of radium in brass screen with several layers of gauze, and rubber around the same; re-treating with one 12 hour treatment in a month's time, if necessary.

In cases of cancer of the ovary, or where there are abdominal metastases, as in cases of cancer of the adnexa of the uterus, a heavy black rubber tube, with a closed end and perforated sides is inserted into or around the growth, and 50 to 100 milligrams of unscreened radium on wires is lowered into this tube for direct application. We have been able, with seeming impunity, to give a dose of from 4 to 8 or even 12 hours duration, without

removing the radium. If the growth is extensive enough to require one or two subsequent moves, the wires are shortened, and bent over the ends of the rubber tube.

In cases of cancer of the bladder and prostate, when there has been a supra-pubic drainage performed, the radium, unscreened, is lowered into the bladder to the offending growth, and left *in situ* from six to eight hours, as it is deemed the case requires. We also employ into the prostatic urethra a radium carrying sound, which is metal and holds 50 milligrams of radium, regardless of whether there has been surgery or not. Often the rectum is used as a means of approach, giving about the same treatment as has been mentioned in cancer of the rectum.

In cases of cancer of the mouth, radium screened with brass is used, or unscreened except for rubber; an attempt is made to give 6 or 8 hours with 50 to 100 milligrams of radium, depending upon the lesion. All sarcoma cases are treated with radium-carrying needles or the implantation of radium tubes.

A report on cancer of the breast has been purposely omitted. Over 100 patients have been treated. A report on this work will be given this year before the American Radium Society, at the Boston Meeting of the American Medical Association.

The limit of time for this paper will not allow a report on the sarcomas treated, which are over 40 in number.

CONCLUSIONS

1. Cases of carcinoma of the vagina and prostate are best treated with radium *alone*.
2. Cases of cancer of the cervix and uterus, which have responded well to the treatment should rarely be hysterectomized later, as distant quiescent diseased cells may be stimulated to recurrence.
3. Radium can be used to advantage before surgery to make non-surgical cases surgical.
4. Radium after surgery may make a success of the operation.
5. Its use in recurrences is palliative but it may cure.

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Ten years ago the A. M. A. published the first edition of the first volume of this book. A year later a second, and enlarged edition of the first volume was issued. Since that time *The Journal* A. M. A. has published, week by week, articles on the nostrum evil, quackery and allied matters affecting the public health. All this material has been collected and appears in the present volume.

Radium in Dermatology*

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Editor's Note.—With proper equipment and a complete understanding of the present technical use of radium, this newer agent in the field of therapy undoubtedly has its broadest opportunities and scope in the domain of the dermatologist. There are few of the conditions the dermatologist is called upon to treat that are not amenable to radium therapy and its utility is especially valuable in locations in which surgery would be cosmetically deforming. In precancerous conditions, as well as in cancer without metastasis, radium may be used to the exclusion of operations. Radium is also very efficient in handling keloids, angiomas, pigmented naevi, lupus and hypertrichosis.

THESE is, perhaps, no other field of medical science in which radium offers so many promises of attainment hitherto undreamed of, as in that of the dermatologist. It has placed in the skin specialist's hands a new weapon which enables him to attack strongholds of disease which have hitherto been regarded as absolutely impregnable, and scarcely a day passes without news of another condition which this marvelous agent has enabled him to conquer. So much publicity has been given to these successes that the general public has become very much interested in the therapeutic use of radium. The layman has learned that its application is simple, painless and quite devoid of the element of horror too often associated with the surgeon's knife, that it has practically none of the drawbacks inseparable from the use of the ointments and lotions generally employed in the treatment of skin diseases, and that the cosmetic results are far more satisfactory than those resulting from any treatment which has been used in the past. To this may also be added the consideration that because the treatments can usually be given in a physician's office, or even in the patient's home, the expense and trouble of a protracted stay in the hospital may be avoided.

NECESSARY EQUIPMENT

Under these conditions it has become absolutely essential for the dermatologist to equip himself to administer radium treatment, and he, who is desirous of giving his patients the fullest benefit to be derived from this curative agent, must be provided with the necessary apparatus. A suitable equipment for such a dermatologist would be a 10-milligram plaque, one-half or full-strength applicator; two universal tube applicators each containing twenty-five milligrams of radium element; and two to four needles of twelve and a half milligrams of radium each. The needles are not absolutely essential, but occasions will arise where they prove of the utmost service. A sufficient quantity of the element is very desirable. Ordinarily the dermatologist's equipment is limited to five or ten milligram plaques. Work-

ing entirely with plaques is bound to limit the range of activity very greatly, and more than that if an attempt is made to employ plaques in all cases—including those in which the use of tubes is distinctly indicated—radium therapy can only result in failure.

CONDITIONS AMENABLE TO RADIUM THERAPY

Let us consider some of the diseases and pathological conditions of the skin in which radium therapy is now proving valuable:—

Epithelioma.—Perhaps no condition oftener seeks the services of the dermatologist than cancer of the skin, because it is so universally recognized as belonging in his special field. Nearly 2 per cent. of all skin diseases are cancerous in nature. It is most prone to attack men over forty living in the country. If it occurs in younger individuals its course is much more rapid and fatal. The records show that 3,500 deaths occur annually from skin cancer in the United States.

Histologically and clinically there are two entirely separate types. (1) The *basalcelled epithelioma* is usually superficial and not very malignant; while (2) the *pricklecelled type* is a true cancer, having metastasis in more than half the cases, often reproducing itself in some remote organ, causing cachexia and death. The basalcelled type may also prove fatal, but only when the process, by direct extension, reaches some vital part such as the orbit, or by the involvement of such an extent of surface that death results from the slow continuous absorption of toxic elements from the foul ulcerating area. From eighty-five to ninety per cent. of all cases are of the basalcelled type.

If an epithelioma originates from a seborrheic lesion it is usually of the basal-cell type, and likely to occur on the face, neck or chest; if it follows a scar, burn, ulcer—syphilitic or otherwise—lupus or other chronic inflammatory lesion, it is more commonly of the prickle-celled variety, and appears on the mucous membrane of the lips or elsewhere. the tongue, or back of the hand. Epithelioma in any part of the lips is usually very malignant and must receive prompt attention. Both types of growth are manifested as a cutaneous or subcutaneous nodule. The basal-

*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio State Medical Association, during the Diamond Jubilee Meetings, at Columbus, May 3-5, 1921.



Figs. 1-2. Baby R., aged three months. Lymphangioma of the left side of the forehead, scalp and upper left eyelid. Condition present from birth. (2) Three months later after 3,750 mg. hours of gamma rays. Notice that the eye is plainly visible.

celled may be verrucous, or slightly ulcerated with rolled edges, showing pearl-like nodules; it may heal spontaneously in the center, while the prickle-celled never does, tending to break down in the center, even after healing has taken place. The location, history and clinical symptoms will usually be sufficient to establish a differential diagnosis.

During the past year I have had under treatment about fifty cases of the basal-celled variety of epithelioma, located on the face, neck, ears, scalp, arm and thigh. Radium has been employed in all of them and the results have been uniformly favorable. Not only have the results been highly satisfactory from a curative standpoint, but also the cosmetic outcome has been excellent. In epithelioma of the eyelid, radium therapy was especially successful. With the prickle-celled type, of which I have had cases located on the face, forehead, mouth and tongue, I have not been so successful, and I believe this to be because in such a malignant growth, prone to metastasis, nothing can be accomplished unless treatment is undertaken very early. All my unfavorable results were cases of long-standing, many having previously undergone treatment, and in some a marked glandular involvement showed them to be hopeless from the beginning. *If radium is applied early enough it will seldom fail to cure any form of cutaneous cancer and the prompt treatment of any suspicious nodule, whether it is possible to differentiate between the basal and prickle-celled type or not, would greatly increase the percentage of success.*

In superficial, pre-cancerous conditions arsenic paste, superficial chemical caustics or carbon dioxide snow may sometimes be of service, if care is used not to repeat the application often enough to cause a real epithelioma, but where such a condition already exists they should never be employed, and though the electric needle, X-ray or even surgery may occasionally be preferable, radium as a rule, is the method of choice. Its rays are more penetrating than those of the



Figs. 3-4. Baby M., aged 4 months. Angioma of the upper part of the right cheek. Present since birth. (4) A perfect result in two treatments, five weeks apart; four hours each with a 10 mg. plaque and 0.3 brass filter.

X-ray and have a peculiar selective action on the cancer cells; as the rays are constant the dosage can be more exactly measured and more accurately applied to the growth, and if burns occur they are far less serious than those of the X-ray, and although painful, heal readily. Because of the disfigurement which is sure to follow the use of X-ray or surgery about the angles of the mouth or nose, or upon the eyes or lids, as well as the difficulty of application, radium is far more efficient in treating epithelioma located in these regions. Then, too, recurrences are less likely to follow the use of radium than either of the other methods. In dealing with children or highly nervous patients the absence of noisy, alarming apparatus is a great advantage, to say nothing of the removal of the danger of overcharged wires or bursting X-ray tubes.

METHOD OF APPLICATION

In applying radium to the superficial basal-celled epithelioma the half-strength, ten-milligram radium plaque is the most desirable apparatus to use. It can be applied without any filter, merely being covered with a small piece of rubber dam, although a brass, silver or aluminum filter may be used. Many dermatologists prefer treating all superficial epithelioma without a filter, leaving the plaque in place from one to six hours at each application, or giving one-hour treatments on successive days until the desired dose has been administered. I prefer a

ten-milligram half-strength plaque, with an 0.3 mm. brass filter covered with a rubber dam, and usually give a six-hour treatment at one sitting; or, if this is not convenient, I give two three-hour treatments on successive days. In some cases the treatment during the last hour is given without the brass filter. This method allows the *beta* and *gamma* rays first to destroy the deep cells, which are, of course, the ones most likely to cause trouble. The treatment given during the last hour reaches the superficial cells.

EPITHELIOMA OF THE EYELIDS AND EYE

In no field of radium therapy are the results so brilliant and satisfactory as those obtained in treating epithelioma of the eyelids or even the eyes themselves. Here, sometimes, the plaques will suffice, but more often tubes are necessary, especially when the inner canthus is involved. In working with the eye proper it is important to administer all treatments within ten days so that the last one will be finished before the reaction occurs. In dealing with lesions of the eyeball or cornea the eye is first anesthetized and the lid held open by a self-retaining retractor. A nurse then holds the properly screened radium directly in contact with the lesion, or it may be kept in place by some specially devised method.

For the treatment of prickle-celled carcinoma of the face from fifty to one hundred milligrams of radium should be applied with heavy screening, such as brass or lead, at a distance varying from one-fourth to one inch, the exact dose and technique depending upon the conditions at hand.

Our aim, in treating deep malignant disease or carcinomatous glands, is to get a sufficient quantity of rays to the growth without destroying the healthy tissues through which the rays must pass, or those which surround the growth, but are not yet involved in the diseased process. To accomplish this we employ *cross-firing*. As healthy tissue is four times more resistant to the action of the rays than diseased tissue, by placing the radium at different angles to the growth the rays



Figs. 7-8. Mr. W. K., aged 42, (Right). Tuberculous varicose cutis of the left side of neck. Duration four months. Two months previous the lesion had been excised, the scar of which can be distinctly seen. (Left). Treatment 900 mg. hours of deep radium therapy. Four months later picture shows that the lesion has entirely disappeared.



Figs. 9-10. Mr. W. B. Y., aged 50. Typical epithelioma of forehead. Duration four years. (10) Treatment 80 mg. hours with 10 mg. plaque and 0.3 brass filter. Four months later no evidence of growth.



Figs. 11-12. Mr. S. M., aged 68. Pterygium of the inner third of the left eyeball recurring after operation. Diagnosis beginning epithelioma. (12) Treatment 450 mg. hours of deep radium therapy. Seven months later apparently cured.



Fig. 13. Mrs. E. D. F., aged 58. Extensive epithelioma of the nose, duration four years. Picture shows the clear white scar that occurs after radium treatment. Treatment 120 mg. hours with 10 mg. plaque with 0.3 brass filter. Three treatments one week apart.



Figs. 5-6. Mrs. G. L., aged 65. Epithelioma lower third of the dorsal surface of the right arm. Duration two years. (6) Treatment 600 mg. hours of deep radium therapy. Apparently cured three months after treatment.

pass through a different mass of healthy tissue at each application, yet always reach the diseased tissue at each irradiation.

Secondary glandular involvement should receive deep massive treatment, but if the glands do not respond promptly to the rays, surgery should be employed. In an advanced case of carcinoma of the tonsil, when a secondary gland did not diminish to any extent after 1,000 milligram hours of deep radium treatment, I insisted that it be removed by surgery. The report of the pathologist, Dr. Faller, upon this enlarged submaxillary gland will give an idea of the effect which radium application has upon malignant disease:



Fig. 14. Mrs. E. B. H., aged 54. Epithelioma of the right lower abdominal wall 8x3 inches. Duration 26 years. Two years previous had extensive X-ray treatment. Lesion reduced one-third in size after 20,000 mg. hours of gamma rays.



Fig. 15. Mr. W. F., aged 45. Extensive epithelioma of the scalp. Seven years duration. Various treatments including X-ray for the past four years with no improvement. Radium therapy seems to be preventing growth from spreading at the outer edge. Notice the complete destruction of the bony plate. In life the pulsating brain shows very clearly.

"Examination of specimen shows a mass of connective tissue in which is embedded some lymphatic tissue and small islands of epithelial proliferation. This latter I should regard as carcinomatous infiltration which is being limited in this growth by connective tissue overgrowth. I would regard this as being mildly malignant. . ."

ENDOTHELIOMA

As a rule endothelioma of the face begins in the parotid gland or its immediate neighborhood. It spreads slowly and responds very quickly to radium therapy when it receives an application of at least 50 milligrams with a heavy filter and long exposure. My case of twenty-four years standing, which involved the right parotid gland, has shown no sign of recurrence after a year and

a half, disappearing after three treatments of 600 milligram hours each.

CANCER OF THE LIP

Of all the squamous-celled varieties epithelioma of the lip is perhaps the most common, and is usually attributed to some form of irritation resulting from smoking, particularly pipe-smoking, or from the irritation of a jagged tooth, or a badly fitted dental plate or bridge. Women seldom have it; it most frequently occurs in men over forty, the lower lip being most commonly involved. It constitutes more than two per cent. of all the deaths from cancer. In a small percentage of cases a definite history of syphilis can be obtained.

The growth may be limited to the mucous membrane proper, beginning as a flat scaly patch or a nodular growth. Sometimes it has its origin at the junction of the mucous membrane with the skin. Though at first its progress may be slow, if it involves both skin and mucous membrane, it will later ulcerate rapidly with great destruction of tissue and early secondary glandular involvement. Because a growth of the lip is so conspicuous the patient is early led to seek attention, and for this reason we often get an opportunity to treat these cases when they are still in their first stages. When they are yet small and superficial, the prognosis for successful radium treatment is usually very good. Janeway, in a recent article, makes the significant statement that "*if it is justifiable to treat any form of early cancer by radium, instead of by operation, it is cancer of the lip.*"

When the growth is limited to the lip and no glandular involvement has yet occurred, radium is certainly preferable to any other means. At least fifty milligrams must be used, preferably in the form of one or two twenty-five-milligram tubes. The first application should be for at least six hours, and the tube should be well screened, with at least one-fourth of an inch distance between the tubes and the surface of the lip. As a prophylactic measure deep radium exposure should also be given to the cervical region, but where the glands are enlarged the use of radium should be confined to the lip and the glands extirpated by surgery, the entire neck being first rayed, however. In two of my cases of lip epithelioma, early treatment with radium caused disappearance without even a reaction, but in another more extensive case, which had already had prolonged X-ray treatment, the radium had no effect whatever. *There is no doubt that as soon as there is general recognition of the fact that this grave condition can be cured without undergoing a painful operation with its resulting disfigurement, many more cases will apply for early treatment, which will result in the saving of many lives, for radium therapy has given a higher percentage of cures than any method ever before employed.*

The dermatologist probably sees more pre-can-



Fig. 16. Mr. W. R., aged 72. Papilloma of the cornea extending over the pupil. Duration 3 years. Reduced two-thirds under radium treatment.



Fig. 17. Mr. J. S., aged 40. Lupus erythematosus of the entire nose. Treatment with radium plaque 0.3 brass filter.

cerous conditions, than the worker in any other special field, so that upon him, more than anyone else, is imposed the obligation of making the general public realize the enormous importance of early and prompt treatment of all pathological skin conditions. In radium he has now a most powerful and efficient agent, which should greatly decrease the present high mortality from cancer. Such affections as keratosis senilis, xerodermapigmentosum, psoriasis, leucoplakia, or chronic localized eczema, scars of burns or lues, fissures of the mucosa and old sinuses, as well as keloids, warts or sebaceous cysts, may be mentioned as types of possible precancerous lesions all of which are reasonably sure of cure by radium if treatment is instituted early enough. While it is by no means inevitable that these conditions will evolve into true cancers, if they are subject to irritation, are enlarging or growing darker in color, especially in a subject over forty years of age, they should receive immediate attention.

ANGIOMA AND PIGMENTED NAEVI

There is no skin lesion which exhausts the dermatologist's resources more thoroughly than the different forms of angioma and pigmented naevi, and radium is proving a most powerful reinforcement in combatting them. The best results have been obtained with the large tuberous vascular angiomas, and the so-called "*port-wine stain*" may be very greatly improved if treatment is begun early in life. The spider naevus is best treated by the electric needle. In handling either the pigmented or vascular naevi, care must be observed not to overtreat the patient. As we are working for cosmetic results we can afford to take our time, being sure that the applicator is well filtered and sufficient time allowed to elapse between treatment to avoid all possibility of scarring. The form of angioma with which we have to deal will decide whether tubes or plaques should be used. A varying technique is necessary in working with the different kinds of pigmented birth marks, all of which do well under radium treatment. I have now under treatment a baby six months old, with lymphangioma of the scalp,

left side of forehead and eye, so that the child could not see on the left side. Three months of intermittent treatment has so improved the condition that the eye can now be used and the case is progressing favorably.

KELOIDS

In applying radium to keloids the size and location of the growth must be taken into consideration. If of recent formation—especially in young children—they respond very readily, but when mixed with scar tissue it is usually necessary to produce a more severe radium reaction. The pain—often quite severe—generally ceases after the first or second irradiation. The plaque will work very well if the keloid is small and of not too long standing. To a boy of twelve, who had a keloid on the right cheek, following the removal of a mole with caustic, I gave three monthly treatments of three hours each, using a half-strength ten milligram plaque, with a 0.3 mm. brass filter covered with a rubber dam, after which the keloid disappeared, leaving a smooth white scar. In another case I employed radium in treating a large keloid over the sternum resulting from the burn of a hot-water bottle. This had twice recurred after excision, but the use of 100 milligrams with a heavy filter at one-fourth inch distance, effected a marked improvement. In all such cases the greatest care must be exercised to avoid burning, as this has been known to result in telangiectasis, even as late as two years after the treatment.

Although planter warts ordinarily yield readily to the electric needle or carbon-dioxide snow, occasions may arise where the application of radium may be desirable. I had such a case in a young woman, who was impeded in her occupation as a stenographer, by a wart under the nail of the left index finger which had resisted all the usual forms of treatment. Under a one-hour application of a twenty-five milligram tube of radium filtered with 1 mm. of silver and thin rubber tubing, the wart disappeared, showing no reaction. Corns and warts on the sole of the feet—often very painful and troublesome—respond well to the same treatment.

I have found radium very effective in treating the papillomata and verrucae occurring in children, as it is painless and easily applied, and in tuberculosis verrucosus cutis and tuberculous ulcers it works like a charm. I had most satisfactory results in an extensive tuberculous growth involving part of the face, also one located on the left side of the neck which had recurred after operation.

Sarcoma cutis should have the benefit of radium, since surgery rarely checks its growth; the earlier the better.

LUPUS

The results of radium therapy in lupus vulgaris are somewhat open to question, as the rays unfortunately do not seem to have any selective

action on the lupus tissue. Those cases which have already been treated by applications of caustics or X-ray are less likely to give a satisfactory response. In handling that intractable skin disease—lupus erythematosus—radium is proving a valuable adjunct to our already long list of drugs and appliances. In treating a lupus patch with radium we must bear in mind the necessity of always applying the irradiation

sents herself with a heavy growth of dark hair on the upper lip, chin or cheeks, we are confronted with a much more serious problem. During the past ten years I have had a number of these cases, coming mostly from the rural districts of Kentucky and West Virginia. A Jewish woman of twenty-seven came to me from Texas with a heavy growth of hair, not only on the face but upon the entire skin surface of both



Fig. 18. Mr. E. H., aged 42. Lupus erythematosus of the cheeks and ears. Improving under radium treatment with plaque.



Figs. 19-20. Mr. W. S., aged 54. Traumatic epithelioma of the lower lip, resulting from a burn with cyanide of potassium. Duration one year. (20) Five months later. 700 mg. hours of radium were given with a 50 mg. tube; later a 10 mg. plaque with an 0.3 brass filter was applied for 3 hours. No glandular involvement. Patient now apparently well.

a little beyond the margins of the lesion. I have come to regard radium as a specific for lupus erythematosus of the mucous membrane. After intervals of from one to three years the eight cases I have treated are all without recurrence, although some of them had previously had years of treatment with X-ray and caustic, without receiving the slightest benefit. Acnitis and follicles—if not too extensive—can also be favorably influenced with radium.

I am now treating a young girl who is a typical tuberculous subject, for tuberculous ulcers of the leg, probably the result of an old follicles. The ulcers are gradually healing under the applications.

HYPERTRICHOSIS

While the electric needle is effective in extirpating a few hairs on the chin or upper lip of a young or older woman, when a patient pre-



Fig. 21. Mr. A. W., aged 58. Epithelioma of the right ear, duration 3 years. Patient received two radium applications of 600 mg. hours each one week apart. Since he was not cured at the end of 3 weeks he decided to discontinue radium treatment.

breasts. As this was before I had radium I foolishly tried the electric needle, but after hours of work was unable to cause the least perceptible improvement. Such patients insist upon our doing something for them, and as the needle is out of the question, we must have recourse to the X-ray or to radium. The X-ray has not proved very satisfactory, but I have tried radium in ten cases of extensive hypertrichosis of long standing with satisfactory results. What we have to fear is superficial scarring or atrophy, later resulting in the formation of telangiectases. My technique, I think, differs from that of most dermatologists, as, except in unusual cases, I do not depend upon the plaque, but use 100 milligrams of radium in tubes. By using this quantity a larger area of skin is covered and the skin reaction is much less pronounced. The exact dosage for the individual patient can only be determined after several trials. These patients are most grateful for any relief given them, and radium is certainly worth a trial in any event, though great care must be exercised when we are aiming for a cosmetic result alone.

OTHER CONDITIONS

In one case of *sycosis vulgaris*, which had resisted the usual method of treatment for ten or

twelve years, I had a very satisfactory result after using radium. The patient, a business man aged forty-five, apparently suffered no skin reaction whatever.

I am treating several cases of *acne rosacea* by radium, but it is yet too early to report any results. Others, however, have had good success in cases where there was considerable local redness. *Localized eczema*, *psoriasis* and *keratosis psoriasisformis*, *lichenification*, *blastomycosis*, *actinomycosis* and *lichen planus* can at times be benefitted by radium therapy. It has been my experience that these cases are apt to have a severe local reaction, and at the first treatment a skin-erythema dose must not be given.

Leukoplakia is always a very stubborn affection and a severe radium reaction must be obtained to cure it. Radium is by far the treatment of choice, in fact it is the only treatment we have today and usually cures, unless the patient is syphilitic, when anti-eyphilitic treatment also is necessary.

Localized pruritis—pruritis ani—does better, and relief is usually afforded and some cures have been obtained with it.

Fordyce's disease and *eczema of the lip* are

conditions which yield to radium treatment. The dermatologist working with radium is often asked to apply it to conditions other than those of the skin, such as *trachoma*, *chronic conjunctivitis*, or *vernal catarrh*. Two cases of vernal catarrh which were referred to me by oculists are improving under the applications, and a papillomata of the cornea and a pterygium of the eyeball that showed signs of malignancy have also been under my care. The first is disappearing rapidly, while the second is apparently cured.

CONCLUSIONS

In conclusion I wish to emphasize my belief that radium is one of the greatest additions to the strength of the dermatologist's armamentarium which has been produced by the progress of medical science, and I am convinced that a thorough and painstaking study of its indications, and the technique required to handle it with the greatest efficiency, will be rewarded by overwhelming success in situations where all methods hereto employed have been ignominious failures.

4 WEST SEVENTH STREET.

PUBLIC HEALTH NOTES

One of the principal speakers before the thirty-first annual session of the Ohio Welfare Conference formerly known as the State Conference of Charities and Correction, in Toledo, October 19-21, was Dr. V. V. Anderson, New York, associate medical director of the national committee for mental hygiene. His subject was "The Organization of Facilities for Dealing with the Problems of the Delinquent." Secretary Robert G. Paterson, of the Ohio Public Health Association, presided at the meeting of the health division, before which State Health Director Snively outlined the work of the State Health Department.

—When the deplorable condition of a number of Huntington Township, Ross County, schools were brought to the attention of the State Department of Education, recently, warning was immediately given the township school authorities that unless orders of the county health commissioner were carried out and the buildings put in such shape that the health of pupils and teachers would not be imperiled, all state aid (\$6,000 a year) would be withdrawn. Following this the schools were closed while repairs were instituted.

—A cancer clinic was opened in Columbus, November 1, in connection with the nation-wide campaign for the control of cancer. Dr. Andre Crotti, Columbus, chairman of the Committee on

Control of Cancer of the Ohio State Medical Association, is director of the clinic, which is being planned as a permanent institution.

—Answering the demand for better sanitation and more employment, the State Department of Health has launched 20 major water projects, including new plants, extensions and filtration systems, and 22 sewerage projects, besides a number of small improvements. These betterments, proposed, agreed on, or under way, are distributed in all parts of the state and will cost approximately \$7,000,000.

—Health Commissioner H. L. Rockwood of Cleveland recently warned former service men suffering from tuberculosis against any treatments promising a quick cure of the disease. He declared that war veterans are being made the subject of too many experiments, and that if the practice is kept up the death rate from tuberculosis will be much higher among this class than any other of the same age.

—Springville, a village east of Tiffin, was said to be virtually cut off from outside communications as a result of an epidemic of scarlet fever on November 1. It was reported that there were 29 cases in the village, affecting 17 of the 20 families residing there. Medical and nursing assistance was sent from the county seat.

—A "Milk for Health" campaign is going on in Canton in an effort to reduce malnutrition. In conjunction with this, a general health betterment program to cover a period of two months is being conducted through the schools, churches, factories, women's clubs, other civic organizations and the newspapers.

DEATHS IN OHIO

Albert Spurgeon Barnes, M.D., Rush Medical College, Chicago, 1900; aged 57; died at his home in Columbus, October 23, from hemorrhage of the femoral artery.

Hamilton Fisk Biggar, Jr., M.D., Cleveland College of Physicians and Surgeons, 1896; former member of the Ohio State Medical Association; aged 48; died in London, England, October 21, following an operation on the throat. Dr. Biggar left Cleveland, his home city, at the outbreak of the war in 1914 and entered the British marine service as a transport surgeon. He continued in the British marine until a year ago, when he left to begin a post-graduate course in the University of London, intending to return to Cleveland and resume practice. Dr. Biggar was formerly a member of the staff of Huron Road Hospital. He is survived by his parents, his father being Dr. H. F. Biggar, Sr., of Cleveland; his widow, two sons and one daughter.

James Peter Boyd, M.D., Long Island College Hospital, 1875; Ph. G., University of Michigan, 1873; aged 71; former member of the Ohio State Medical Association; died November 10. Dr. Boyd was born in Wimbleton, England. He practiced in Akron until 1920, when he retired to Larchmont, New York.

William Wallace Carey, M.D., Eclectic Medical College, Cincinnati, 1903; aged 55; died in New York, November 6. Dr. Carey's home was in Cuyahoga Falls, Ohio. He was a native of Canada.

Josiah E. Cooper, M.D., Eclectic Medical College, Cincinnati, 1896; aged 52; died at his home in Springfield, November 3, of heart disease. Besides his widow he leaves one brother and five sisters.

Frank Jackson George, M.D., Medical College of Ohio, 1894; member of the Ohio State Medical Association and Fellow of the American Medical Association; aged 55; died at his home in Okeana, Butler County, October 12, from cerebral hemorrhage. Dr. George located in Okeana immediately after his graduation and practiced there continuously for more than 27 years. Dr. George served with the rank of captain in the Medical Corps of the Army during the World War. He leaves a son, four brothers and three sisters.

Fannie A. Groat, M.D., Northwestern University Woman's Medical School, Chicago, 1883; aged 78; died October 21, in Elmore, where she was visiting. Dr. Groat's home was in Aurora, Illinois. She was the widow of the late Dr. Julius Groat, at one time a practicing physician in Fremont.

Josiah S. Hedges, M.D., Western Reserve University School of Medicine, Cleveland; 1890;

aged 64; died at his home in Cleveland October 10, after an illness of several years. Dr. Hedges practiced in Mansfield for a number of years before removing to Cleveland in 1913. He leaves his widow, one brother and one sister.

Harry W. Patrick, M.D., Baltimore Medical College, 1893; aged 55; former member of the Ohio State Medical Association; died at his home in Lakewood, September 6, from cerebral hemorrhage. Dr. Patrick practiced in Mansfield before locating in Lakewood.

Joseph M. Ratliff, M.D., Cincinnati College of Medicine and Surgery, 1878; aged 73; member of the Ohio State Medical Association; Fellow of the American Medical Association and the American Psychiatric Association; died at his home in Cincinnati, November 5, from chronic myocarditis. Dr. Ratliff was formerly superintendent of the Dayton State Hospital. For the past seven years he has been interested with his son, Dr. T. A. Ratliff, in the operation of Grandview Sanitarium, Cincinnati, of which he was medical director. Dr. Ratliff was a veteran of the Civil War, and served during the recent war as a member of the District Advisory Board.

James M. Rice, M.D., University of Louisville, Kentucky, 1894; aged 62; died at his home in Fremont, October 6, from paralysis.

Charles North Smith, M.D., Bellevue Hospital Medical College, New York, 1882; aged 61; member of the Ohio State Medical Association; died in Mercy Hospital, October 25, after an illness of several weeks caused by cerebral endarteritis. Dr. Smith was a former president of the American Association of Obstetricians and Gynecologists and also of the Toledo Academy of Medicine, and at one time served as councilor of the Fourth District of the Ohio State Medical Association. He was active in hospital work in Toledo, being a member of the advisory board of St. Vincent's Hospital for twelve years and a member of the staff of Flower Hospital. During the war Dr. Smith rendered valuable service as a member of the Ohio Council of National Defense in the organization of the Volunteer Medical Service Corps. Two sons survive.

Charles Stephen St. John, M.D., Cleveland College of Physicians and Surgeons, 1883; aged 67; member of the Ohio State Medical Association; died at his home in Bowling Green, October 12, from cerebral hemorrhage. With the exception of two and a half years' practice in McComb, Dr. John spent his entire medical career in Bowling Green. He leaves his widow and two children.

Bebee L. Van Winkle, M.D., Miami Medical College, Cincinnati, 1889; aged 58; member of the Ohio State Medical Association; died at his home in Belpre, Washington County, October 3, from paralysis. Dr. Van Winkle had been a resident of Belpre for 22 years. His widow survives.

Conservation Rather than Promiscuous Adoption of Innovations Urged in Approaching New Medical Economic Problems

That the medical profession as a unit should be opposed to all schemes and proposals based on theory and sentiment alone is expressed in a recent paper by Dr. Edward H. Oschner, of Chicago.

It is his belief that physicians should look with disfavor on all propositions:

1. *Which are not absolutely necessary.*
2. *Which introduce new evils.*
3. *Which advertise a few at the expense of the many.*
4. *Which appropriate without fair remuneration the skill, knowledge and time of the physician.*
5. *Which are palliative instead of preventative or curative.*
6. *Which further place medical men under lay supervision.*
7. *Which unduly interfere with the individualism of the medical man or are paternalistic.*
8. *Which have a tendency to pauperize the public and thus destroy the self-respect and self-reliance of the people.*

In the following paragraphs Dr. Oschner briefly considers each one of the above eight tests:

"1. I believe that the medical profession of America renders better service to its fellow men than does any other group of citizens. I believe that the average American citizen has better medical care than the average citizen of any other country on the globe. If these two statements are true, what is the need of any of these new fangled schemes? Of course, we must have progress, but—

"2. Let us be very careful in adopting new schemes to see that they do not introduce new evils—evils which may be greater than those we are trying to correct. It is about time that we physicians look where we are stepping. Make sure first that we are going in the right direction before we adopt any scheme. Then if it proves good, adopt it, but let us not keep a-moving just for the sake of moving.

"3. Let us analyze the real fundamental reasons for the establishing of free clinics and dispensaries in Chicago as elsewhere. You will find four reasons—two are legitimate and two are not. The legitimate ones are to provide proper medical care for the sick poor, and to provide teaching material for medical students. The illegitimate ones are for the purpose of advertising a certain doctor or group of doctors, or to act as a feeder for a certain hospital. When we adopt new schemes let us be careful that they are for the benefit of the rank and file of the profession and the people and not for the aggrandizement of a few.

"4. We should also oppose every scheme which appropriates the time, skill and knowledge of physicians without just, fair and reasonable remuneration. Why? Because anything which continuously works to the disadvantage of the medical profession will in the end work to the harm of all the people of this country. Next to stability of government, honesty of administration and general intelligence of the people, the welfare of a nation depends more upon the quality of medical service which is rendered to its citizens than upon any one other thing. The longevity, health, efficiency and happiness of a people depend more upon the integrity, ability and industry of its medical profession than upon anything else. If these two postulates are true, and I think they are, then anything which hinders medical progress and which will have a tendency to prevent suitable young men from entering the profession is inimical to the best interests of the whole nation.

"5. We should oppose every scheme which is a palliative instead of a preventative or curative. It is an axiom in medicine and surgery and should be in political economy that a palliative must not be used continuously for any considerable period of time unless the case is hopeless. These people who want to reform every one except themselves are continually advocating the continuous use of palliatives and this is a serious economic mistake. We physicians have learned better. We use morphine only to bridge over a period of short stress or to alleviate a hopeless condition.

"6. We should oppose any scheme which has a tendency to further place medical men under lay political supervision and control. Medical men are being more and more dominated by laymen. This is a bad thing for the medical profession and a very serious obstacle to medical progress. Our hospitals are being more and more dominated by lay boards; our medical colleges are virtually completely under the control of laymen. Quite a number of our medical schools have deans who are not medical men, who cannot practice medicine in the state in which they are deans because they are not medical graduates. Another group of our medical deans while they are graduates from medical schools are unfit to practice medicine because they have had no practical experience in the practice of medicine. A very large group of our medical teachers are not medical men and while the old system of ownership of medical colleges by physicians had many objections, the new system has many objections which are even more serious. Our national, state and county institutions with

their thousands of patients are controlled by lay boards. In Europe where Compulsory Health Insurance has been in force, this control is so menacing that medical progress has practically ceased. Frederick L. Hoffman is reported as having found a very amusing incident in his recent investigation of the workings of the Compulsory Health Insurance act in England. An English panel doctor prescribed fifteen capsules for a patient but the patient got well when he had taken nine. This physician was called before the lay board, censured and fined because the lay board claimed that he should have known that the patient needed only nine capsules for his recovery. How would you gentlemen like some lay board appointed by Hinky Dink, Bathhouse John, or John the Pow, or some other group of equally powerful politicians in this city, any one of whom has more political influence than all of you combined, to tell you just what you may and may not do in the practice of medicine?

"7. It is time, gentlemen, that the medical profession wake up. I am not a pessimist but the medical profession is today facing the most serious crisis that it has ever faced in the history of American medicine. Most of these schemes interfere with the individualism of the medical man. There can be no medical progress without individualism and without individual liberty. In political economy I believe in *voluntary cooperative individualism*, in other words *democracy* as opposed to *socialism and autocracy*. I am opposed to each and every one of the fifty-seven varieties of socialism because it interferes too much with individualism and dampens personal enthusiasm and incentive. I am opposed to autocracy for much the same reason.

"8. We should oppose any scheme which has a tendency to pauperize the public or which robs the people of their self-respect and self-reliance. Practically every eleemosynary institution is evidence of some fault in our economic system. It may be necessary now but our supreme effort should be to make all such institutions superfluous. We must have certain charitable institutions today but outside of charitable institutions for mental, moral, and physical defectives who are unable to provide for themselves, the time should come and must come and will come, if we progress in civilization, when there will be no other charitable institutions because charitable institutions, no matter how carefully managed, have a tendency to take from independence its proper pride and from mendicancy its salutary shame. Shakespeare said very well, as he always said very well:

"Who steals my purse steals trash; 'tis something, nothing;
'Twas mine, 'tis his, and has been slave to thousands;

But he that filches from me my good name
Robs me of that which not enriches him
And makes me poor indeed."

"If Shakespeare had lived in this present day with all the innumerable welfare schemes in operation and contemplation he would have added in very much better English than I can command the following thought: 'And he who deliberately robs any man of his self-respect and self-reliance is infinitely worse than even the thief or the blackguard. He is an enemy to society and a menace to free institutions.' Free institutions depend upon self-respecting citizenship and many of these welfare schemes rob men and women of their self-respect and self-reliance.

"The activities of medical men, as medical men, can be classified into three functions: First, sanitation and public hygiene; second, the teaching of personal hygiene, and finally, the treating of disease. The first is distinctly the function of the state and the last is distinctly the function of the private practitioners of medicine."

Conference on Water Purification

Superintendents of Ohio water purification plants held an interesting conference in Columbus, November 21-22. At this conference the State Department of Health presented principles under which it wishes all water purification to be conducted, and rules governing methods and materials were formulated to standardize operation of plants.

About 60 per cent. of the people of Ohio served with a public water supply are drinking filtered water. It varies widely in quality, influenced by the age and type of plant and the method of operation. The human element also is an important factor in influencing the quality of output. Some 18 or 20 men in charge of water purification for Ohio cities are graduates of schools of the country and skilled in every phase of the problem. There are also between 20 and 25 men who have come up from the ranks of water department work and have gained high standing in purification work.

The conference considered standards of purity and the factors entering into them; burdens on the plant and the processes involved; chemicals used and the cost, with the view to possible reduction by standardization of materials; and methods of operation.

APPOINTED TO DIPLOMATIC SERVICE

Dr. J. Morton Howell, of Dayton, has been appointed and accepted the post of diplomatic representative and consul general of the United States to Egypt. He sailed for his new home in Cairo early in November.

Holders of Permits to Prescribe Narcotic Drugs Should Study the Revised Rules on the Application of the Harrison Law

New regulations have just been issued by the Commissioner of Internal Revenue amending instructions previously issued in regard to the application of the Harrison Law to the treatment of incurable diseases and drug addicts. They are formulated in accordance with recent court decisions and the attitude of the medical profession on the subject generally. As it is impossible to lay down an inflexible rule which will cover all cases, the new rules are of necessity general in nature and subject to modification through further interpretation of the law by the courts.

Physicians holding permits to prescribe narcotic drugs should read the revised instructions, reproduced below, carefully, since they contain several new directions on the use of narcotic drugs in the treatment of acute and incurable diseases and of drug addicts. While they are more specific and tend to clarify points that have formerly been somewhat in doubt, they are at the same time more liberal than regulations heretofore issued. They place the responsibility on the physician where it rightly belongs and base the question of violation of the law on his good faith.

1. **USE OF NARCOTICS IN THE TREATMENT OF DISEASES WITHOUT REFERENCE TO THE QUESTION OF ADDICTION.**—Without reference to the question of addiction, a physician acting in accordance with proper medical practice may prescribe or dispense narcotics for the relief of acute pain or for any acute condition such as influenza, pneumonia, renal calculi, broken limbs, etc.

2. **USE OF NARCOTICS IN THE TREATMENT OF INCURABLE DISEASES.**—A reputable physician directly in charge of bona fide patients suffering from diseases known to be incurable, such as cancer, advanced tuberculosis, and other diseases well recognized as coming within this class, may in the course of his professional practice, and strictly for the legitimate medical purposes, dispense or prescribe narcotic drugs for such diseases, provided the patients are personally attended by the physician, that he regulate the dosage, and prescribes no quantity greater than that ordinarily recognized by members of his profession to be sufficient for the proper treatment of the given case. Physicians will be held accountable if through carelessness or lack of sufficient personal attention the patient secures more narcotic drugs than are necessary for medical treatment, and devotes part of his supply to satisfy addiction. The physician should clearly set forth on each prescription the date issued, and the full name and address of the patient, and describe in undisputable terms the exact nature of the ailment for which issued. It would

not be lawful under any circumstances to place in the hands of an addict, through prescription or otherwise, a sufficient quantity of narcotic drugs to last a week. In incurable and aged and infirm cases, geographically isolated, where it would otherwise work extreme hardship, and where there is no danger of maladministration or diversion to illegitimate use, the physician in charge may, at his own risk, upon obtaining permission from narcotic agent in charge of the district, prescribe or dispense a week's supply or more, fully guarding the same by placing it for administration in the custody of a responsible nurse or attendant. Accurate records must be kept of such prescribing and administration.

3. **USE OF NARCOTICS IN THE TREATMENT OF ADDICTION ONLY.**—Mere addiction alone is not recognized as an incurable disease. It seems necessary, however, to divide the addicts not suffering from an incurable disease into two classes (a) Those suffering from senility, or the infirmities attendant upon old age, who are confirmed addicts of years standing, and who, in the opinion of a reputable physician in charge, require a minimum amount of narcotics in order to sustain life; and (b) Those whose addiction is not complicated either by incurable disease or by the infirmities attendant upon old age.

(a). **AGED AND INFIRM ADDICTS.**—Addicts suffering from senility, or the infirmities attendant upon old age, and who are confirmed addicts of years standing, for all intents and purposes, may be treated in the same manner as addicts suffering from incurable diseases. In such case, where narcotic drugs are necessary in order to sustain life, a reputable physician may prescribe or dispense the minimum amount necessary to meet the absolute needs of the patient. As in the treatment of those addicts suffering from incurable diseases, physicians will be held accountable if through carelessness or lack of sufficient personal attention the patient, by securing more narcotic drugs than necessary for his medical treatment, is able to devote part of his supply merely to satisfy addiction. In this class of cases the physician issuing the prescription should make a statement on the prescription to the effect that the patient is aged and infirm, giving age, and certifying that the drug is necessary to sustain life.

(b). **THE ORDINARY ADDICT.**—It is well established that the ordinary case of addiction yields to proper treatment, and that the addicts will remain permanently cured when drug taking is stopped and they are otherwise physically restored to health and strengthened in will power. This bureau has never sanctioned or approved

ACADEMIES AND COUNTY SOCIETIES

CLEVELAND

(Lester Taylor, M. D., Secretary)

The one hundred and seventy-second regular meeting of the Academy of Medicine of Cleveland was held October 21, in the auditorium of the Cleveland Medical Library.

"The Early Treatment of Anterior Poliomyelitis" was presented by Dr. Henry O. Feiss. The paper represented his experimental work on poliomyelitis of dogs and showed that the symptoms were largely due to blocking of the nerve by the pressure of a localized edema. He emphasized three main points: (1) that the muscle itself was not involved; (2) that the repair was early because of the relief of pressure; and (3) that under any treatment there was a tendency to improve. He did not believe in enforced rest in the early stages but stimulated his patients to use the muscles which were the weakest. These muscles could be made to functionate through the central nervous system. Discussed by Drs. Stern and Kurlander.

Dr. Sanford outlined the relation of the Legislative Committee to the Justice Survey and introduced its representative, Dr. Herman Adler, Illinois State Criminologist and Professor of Criminology, University of Illinois, College of Medicine, who spoke on "Medical Science and Criminal Justice."

At the conclusion of Dr. Adler's report, partially reproduced on page 868, there was discussion by Attorney A. B. Thompson, Dr. A. P. Hammond, coroner, and Dr. P. A. Jacobs, former coroner. Discussion closed by Dr. Adler. Upon motion of Dr. Karsner the report was referred to the Council of the Academy of Medicine for study and further action. A vote of thanks was moved to Dr. Adler and to the Cleveland Foundation for releasing this report to the Academy before giving it to the general public.

FIRST DISTRICT

Adams County Medical Society held an excellent meeting in Manchester, October 26. The program opened at 11:00 a. m. with an address on "Intestinal Obstructions" by Dr. W. D. Haines, Cincinnati. Following a dinner served at the Central Hotel, the program was resumed with Dr. A. N. Ellis, Aberdeen, as the speaker. Dr. A. R. Carrigan discussed the subject of "Tuberculosis."—O. T. Sproull, Secretary.

Highland County Medical Society, meeting at the Harper Hotel, Greenfield, October 19, heard splendid addresses by Drs. F. M. McCarthy and J. H. Skavlem, both of Cincinnati. The former spoke on "The Relationship of Nasal Sinuses to

Pulmonary Infections," and the latter on "Differential Diagnosis of Pulmonary Lesions to Sinus Infections."—H. H. Lowe, Secretary.

Warren County Medical Society, in session at Lebanon, October 11, elected the following officers for the coming years: president, T. E. Keelor, Lebanon; vice-president, J. W. Moore, Carlisle; secretary, Herschel Fisher, Lebanon; treasurer, Mary Cook, Waynesville; board of censors, A. C. Roberts, Morrow, S. S. Stahl, Franklin and C. A. Hough, Lebanon; delegate, N. A. Hamilton, Franklin; legislative committee-man, B. H. Blair, Lebanon; medical defense committeeman, N. A. Hamilton, Franklin.

SECOND DISTRICT

Darke County Medical Society held a well attended meeting at Henry St. Clair Memorial Hall, Greenville, November 10th. Dr. H. H. Vail, Cincinnati, spoke on "Suppurative Otitis Media," and Dr. H. L. Kretschmer, Chicago, on "Kidney Stone Surgery," illustrated by lantern slides. The annual election of officers resulted as follows: President, G. W. Burnett, Greenville; vice-president, F. M. Kissel, Pittsburg; secretary-treasurer, A. F. Sarver, Greenville, (re-elected); board of censors, A. W. Rush, Greenville, J. S. Neiderkorn, Versailles; public health committee, J. C. Poling, Ansonia; legislative committee, J. E. Hunter, Greenville, J. W. Van Lue, Gettysburg; corresponding secretary, B. F. Metcalfe.—B. F. Metcalfe, Correspondent.

Marion County Medical Society entertained dentists of the county at its meeting on November 8th, when the subject of "Focal Infections" was taken up. Dr. John Phillips, of Cleveland, discussed the matter from the viewpoint of the diagnostician, covering the field in a thorough manner and illustrating with case histories. Dr. Weston Price, dental pathologist of Cleveland, spoke from the angle of the dental pathologist, presenting his views in a concise, direct manner. Dr. Price told of his researches, showing on the screen a series of very interesting cases of disease in man; then by inoculation succeeding in reproducing many of the same conditions in rabbits. The meeting was attended by 45 physicians and dentists.—J. A. Dodd, Secretary.

Miami County Medical Society enjoyed its first regular meeting at Troy, October 6, following the customary summer recess. Dr. A. H. Haworth, local health commissioner, gave an interesting talk on "Enlarged Thyroids in School Children", which was followed by a lively discussion. Dr. S. D. Hartman, Tippecanoe City, spoke on "Treatment in Cases of Prolonged Convalescence". His views were based on years of practical experience.—G. J. Hance, Secretary.

THIRD DISTRICT

Logan County Medical Society met in regular monthly session at Bellefontaine, November 4. A good luncheon was followed by a report on the Sheppard-Towner bill by a special committee. The

committee declared itself in accord with the editorial appearing in the *Journal A. M. A.*, October 29, 1921, and the society adopted the report and instructed the secretary to express these sentiments to the chairman of the committee in the House of Representatives, our Representative and the two Ohio Senators. The society approves the purpose and objects of the bill but objects to the method and manner in which same are to be carried out. Resolutions of regret at the death of Dr. L. C. Pratt were adopted. Dr. Carey, county health officer, reported on work done in connection with the cancer control campaign. Dr. Hamer called attention to the great need of a full-time health officer in Logan county and the society went on record very strongly in favor of the plan. A committee was appointed to gather data and present resolutions to the proper county authorities and urge action in this direction as soon as possible. Dr. Pay presented an instructive case of alopecia areata, and Drs. McCracken and Startzman read well prepared papers on "The Clinical Aspects, Laboratory Diagnosis and Treatment of Syphilis", which were fully discussed.—M. L. Pratt, Secretary.

FOURTH DISTRICT

Henry County Medical Society has elected Dr. I. H. Boesel, McClure, as its president for the coming year. Dr. C. H. Skeen, Napoleon, was reelected to the secretaryship.

Sandusky County Medical Society members to the number of 20, were the guests of Dr. W. R. Deemer, at his home in Fremont, October 27. The committee appointed to confer with the Kiwanis Club on the proposal to erect a filtration and softening plant for the city, reported that it had in effect become a part of the Civic Committee made up of five members each from the Exchange Club, Chamber of Commerce, Women's Federation, Central Labor Union and Kiwanis Club; that the cooperation of the medical society was welcomed with much visible display of approval and satisfaction; that the credit for recognition of the medical fraternity as an organization belongs to the Kiwanis Club; and that the opposition to the project ceased immediately upon the entry of the medical society into the fight for a decent water supply for the city. Dr. Miles F. Porter, Jr., Fort Wayne, Indiana, was the essayist of the evening and his subject "Hyperactivity of the Thyroid Gland." A lively discussion followed the presentation of Dr. Porter's address, after which he was congratulated and elected to honorary membership in the society.—C. I. Kuntz, Secretary.

FIFTH DISTRICT

Ashtabula County Medical Society held its 146th regular meeting at the Hotel Ashtabula, October 11. Dr. Arnold F. Ferrer, secretary of the Cleveland Milk Commission, was the guest of the evening and gave an interesting and help-

ful talk on "Certified Milk." After a general discussion of the subject the president was authorized to appoint a committee of five from the society to serve on the milk commission for Ashtabula County, and to membership on the committee Drs. Wasson, Pardee, Leet, Smith and Case were named.—J. J. Hogan, Secretary.

Lorain County Medical Society held its monthly meeting in the Lorain Public Library Building, November 8, with a good attendance from Lorain, Elyria, Oberlin, Amherst and Wellington. Dr. Nat Jones, of Cleveland, gave an interesting and practical talk on "The Treatment of Fractures of Long Bones, Especially Those Fractures Near the Joints," which was full of helpful suggestions. Dr. Birt Garver's discussion of the paper was much enjoyed.—W. E. Hart, Secretary.

SIXTH DISTRICT

Summit County Medical Society met in regular session at Akron, November 3, with an attendance of 81 members and guests. Dr. P. R. Adams, Akron, was admitted to membership, and four applications for membership were presented. The program was as follows: 1. "Celosehises", report by Dr. S. Greenfield. 2. "Remarks on Roentgenology", by Dr. S. St. J. Wright. 3. "The Treatment of Injuries of the Hand and Wrist", illustrated lecture by W. A. Cochrane, M. B., F. R. C. S., Edinburgh, Scotland. The last mentioned address was a masterly, very scientific lecture which received praise from all present as one of the finest ever heard by the society. While in Akron Mr. Cochrane was the guest of Drs. Conn, Luce and Kramer, his former comrades in the Royal Army Medical Corps.—A. S. McCormick, Secretary.

SEVENTH DISTRICT

Monroe County Medical Society, meeting in Woodsfield October 13, elected Dr. G. W. Steward, Woodsfield, as its president for the new year. Dr. J. H. Pugh, Woodsfield, was reelected as secretary.

TENTH DISTRICT

Ross County Medical Society members and many other physicians from the surrounding country and various parts of the state were the guests of Dr. G. E. Robbins, president of the society and county health commissioner, at his home in Chillicothe, November 1. Among the honor guests at the meeting were Health Director Snively, Columbus; Dr. Robert Carothers, Cincinnati, president-elect of the State Association; and Dr. S. J. Goodman, Columbus, counselor of the Tenth District, all of whom commended the host for his splendid work as health commissioner.—News Clipping.

A MERRY CHRISTMAS IS THE JOURNAL'S BEST WISH TO ITS READERS, ADVERTISERS AND FRIENDS

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Malignancies of the Colon and Their Consideration*

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Editor's Note.—Drs. Erdmann and Carter stress a very significant fact with regard to malignancies of the colon, namely, the frequency with which patients are operated upon for appendicitis, when the real pathology is a cancer of the gut. The differential diagnosis would seem to be confusing to many internists and surgeons because they do not keep either the frequency of regional incidence or the variations in symptomatology clearly in mind. Drs. Erdmann and Carter are quite right in emphasizing certain life-saving preliminaries to radical operations, such as temporary or permanent artificial anus and thorough intestinal cleansing. In their hands the operation of Mickulicz, while it has given good results, has involved too prolonged hospitalization of patients. The various methods of anastomosis and implantation used depend not only on the conditions found at operation but also on the technical skill of the surgeon. With metastasis life extension after operation has been from 8 to 24 months or more; without appreciable metastasis the series of cases presented show a number of patients living from 1 to 6 years after operation.

FEELING THAT a consideration of my work in this field at the Post-Graduate Hospital and Medical School, added to the work done in several outside hospitals, would be of more practical benefit than a theoretical paper, I am considering 129 patients, in a service of the last six years, that have passed under by operative consideration.

Of this number, 15 were inoperable from the standpoint of metastasis to other organs, and 9 were inoperable from the viewpoint of extensive regional metastasis. The remaining 105 were operated upon according to some one of the various types of palliative or radical methods, which will be considered later.

FREQUENCY OF REGIONAL INCIDENCE

Malignancies of the colon have been observed over fifty per cent. more frequently during these six years than malignancies of the stomach. During this period carcinoma of the stomach (in the Post-Graduate Hospital) was seen in 70 patients, while carcinoma of the colon was found in 96 patients in the same service. These figures bear no positive relationship to the frequency or excess of the colonic patients but present a fair indication of colonic malignancies. The sites of frequent occurrence are considered under the regional classification in the order of the frequency found in the number considered in this article.

1. In the inferior division of the inferior mesenteric division—that portion of the gut from the anus to the sigmoid, including the so termed sigmoido-rectal junction—a series of 50 out of the total of 129.

2. In the superior division of the inferior mesenteric—or the sigmoid zone proper—a series of 37 out of the total of 129.

3. The ileo-colic or the caecum and the terminal ileum presents a record of 18 out of the 129.

4. The mid-colic region—considering this area to include the upper half of the ascending colon, the hepatic flexure and the proximal half of the transverse colon—presents 15 out of 129.

5. The distal-colic region—including the distal half of the transverse colon and the descending colon—sums up 9 patients.

The regional frequencies present food for thought as to the etiological factors so frequently given as stasis irritation. The anal types—those involving the lowest segment of the rectum and the sphincter—were seen quite frequently in the first list. They have been and are still the source of great speculation as to causation beyond that of the muco-cutaneous margin theories.

SEX AND AGE

A series of 86 patients, under observation at the Post-Graduate Hospital, were rather equally divided between the sexes, 46 being males and 40 females. But a marked difference in sex preponderance occurs in the female in cancers of the lowest segment. In the sigmoid, there were 10 more males than females, while in the recto-sigmoid and recto-anal cases there were 10 more females than males.

The average age of patients operated upon was 49-1/5 years—the youngest being a female 22 years of age and the oldest a female of 89.

CHARACTERISTICS OF GROWTHS OBSERVED

The rapidity of growth in these patients is influenced as in cancer in other parts of the body—

*Read before the Northwestern Ohio District Medical Association, at Toledo, October 7, 1921; also Section in Surgery New York Academy of Medicine.

i. e., by the age of the patient and the type of the cell. The more youthful the patient, the more rapid the growth. The lapse of time between the initial cell change into carcinoma and the date of operation cannot be estimated, as all calculations must be based upon and from the appearance of the first symptom, either subjective or objective; and unfortunately often the first symptom is objective—such as evidence of blood or mucus in the stool.

Multiple growths in the colon have not been encountered in this series, although I have seen them in other patients considered in an earlier contribution. A rather unusual instance occurred in this series. One of the patients had had a typical Freidreich's operation done by me for a carcinoma of the appendix, with caecal contiguity and continuity growth, three years ago, and during the past 8 months suffered a complete obstruction, due to a growth in the sigmoid. It may well be speculated that this patient had his sigmoid growth at the time of his first operation, or that he had a metastasis (unusual) in the sigmoid from his appendix growth. It was true that he had been submitted to an exploratory appendix operation one year before I saw him, and that his diseased appendix, for some unknown reason, was not removed.

SYMPTOMATOLOGY

From the standpoint of regional classification the symptoms should vary somewhat, but in the main they are prone to slight variation. It is well observed fact that in growths involving the caecum and the ileo-caecal region *obstruction* is a rarity, due to the liquid state of the contents of the small intestine. No *acute ileus* was observed in any of our patients suffering with a growth in this zone. It is a well known fact that growths of the caecal zone are early associated with *marked anaemia*. It is also observable that tumors of the caecum are *palpable* as a rule late in the process of the disease and that the X-ray is not conclusive as early as in growths in the distal half of the colon.

These patients complain of a feeling of *distress, soreness and pressure* in this site. In fact this is true to such a degree, that quite frequently an appendicitis of the recurring variety is not only suspected, but the patients have been operated upon for such a disease, the real state of affairs in five of the patients coming to me having been overlooked by the original operators.

Colic in this area is evidenced only when the growth involves the ileo-caecal valve area to such a degree as to become obstructive. As the disease progresses in the distal portion of the colon, cramps or colics become more and more evident. This is essentially due not to the invasion of the lumen of the gut as much as to the difference in the fecal consistency. The more solid the content the more prone to plugging is the lumen, and conversely the more liquid the

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content, the smaller the lumen may be without producing a colic or obstruction.

Toxaemias are seen more in the obstructions of the distal half, due to the proximal deflection of the faecal current, the growth of the intestinal bacteria and their absorption, due to the obstructive stases.

Borborygmus is a frequent evidence especially when obstruction becomes evident.

I have been laying a great deal of stress on the *succussion* sound in the caecal zone in various types of obstruction in the colon. This sound is made by the liquid contents of the caecum distending the caput and the gas that of a necessity is forced into this portion of the intestinal tract. This succussion or splash sound indicates an early operation.

Occasionally there are *sciatic, lumbar and perineal pains* due to nerve involvements by the descending colon, sigmoid and recto-sigmoidal growths, in addition to the general signs and symptoms. *Tenesmus* is one of the early symptoms to which the patient's attention is called in the lower distal or sigmoid and rectal involvements. *Pain in the back, an unfinished sense after defecation, blood or mucus, or both in the stools, the lapse of ambition, loss of weight and the sallow cachetic countenance are all distinct symptoms.* While in the recto-anal with or without infiltration or ulcer we frequently have *complete sphincteric failure.* The occurrence of *perforation* is not to be underrated. When there is a sharp pain in the lower left quadrant, without emaciation or a fairly long history of tenesmus or bloody or mucous stool, the inference is one tending to a perforating diverticulitis, rather than a perforated malignancy. There were three patients, in the series of 129, in whom perforated malignancies were found. Each of these had a sigmoid growth.

METHOD OF TREATMENT

Treatment of these growths today resolves itself into the radical surgical procedure in the proximal 3/4 of the colon; and the question of radical operation versus radium with or without excision. These methods I shall discuss later.

As a *preliminary to operation*, when possible, in this class of patients, thorough intestinal cleansing should be instituted. This consists of intestinal drainage when the growth is not obstructive, or establishing an artificial anus in some portion of the intestine proximal to the growth. This site is a matter of choice to the operator, but for years my selection has been the caecum in preference to the other segments of the colon, because in all growths distal to the caecum, this position of the artificial anus is remote from the field of the final operation and does not interfere by newly formed adhesions nor by soiling; and, finally, it is very easy to close after its functional utility has been terminated. The cleansing of the distal bowel

through a caecostomy is readily performed by irrigations after the caecostomy is old enough—two to four days—to prevent leakage into the peritoneal cavity. It is gratifying to observe with what facility the rectal tube can be introduced into the colon through the caecostomy wound during the period of irrigation. A reverse peristalsis takes place very readily during this period. During the time of the functioning artificial anus and before operation is performed, careful attention must be given to the renal functioning and nutrition.

Permanent Artificial Anus.—Under the heading of radical procedure one must consider the formation of a permanent artificial anus and the removal of the growth, with repair of the divided ends of the gut. Artificial anus, as a temporary expedient, has been discussed, but as a permanent objective several very important pathological features must be considered. A permanent artificial anus is to be made only in those patients, in whom we find the growth so firmly fixed to surrounding structures that removal would end disastrously, or in patients, in whom the contiguous and remote metastases are so extensive as to predicate an early demise with or without operative procedure. In this latter type with remote metastases, as in the liver, I have been doing the radical resection with anastomosis, because a permanent artificial anus does not cause the metastases to subside, and because patients with an artificial anus in this variety of pathology, living for a period of from a few months to the best part of 2 to 3 years, with all the disagreeable association of an artificial anus, could have had all the discomforts allayed or abolished by an inconsequential additional risk. I have been very pleased with my results in this type of operation, during the past five or six years.

In the permanent artificial anus patients two methods of procedure as to the growth are to be followed. In the first instance the growth is left, while in the second the growth is removed with all the surrounding tissue. The growth is left in those patients in whom we find the infiltration extending beyond the possibility of total removal. Therefore, rather than to excite a mushroom activity, the distal segment, after the proper preparation, is dropped into the abdomen and the proximal end is sewed into the abdominal wall; or if, as in the lower sigmoid growths, one may leave the double barrelled anus so that radium may be applied directly from above and below through the upper and lower stomas of the bowel. In the event that the growth is removable, (this applies of course to the lowest segment), the lower portion is liberated from the sacral groove. Then a perineal approach is made to liberate this portion, the whole segment with the growth being delivered through the perineal incision.

In the event of a non-removable growth, in portions of the colon proximal to the sigmoid-

rectal zone, short-circuiting by means of a colonic or ideal by-way is in order. This prevents an early total obstruction or a series of periods or partial obstruction.

Anastomosis.—As to the question of the method of anastomosis, end to end, side to side or end to side—by suture or mechanical appliance, one must judge his own capacity for the type he will select. The advance in ability to suture without leakage in the great majority of instances, the ability to do fairly rapid work, and the improved qualities of catgut now upon the market, place the Murphy button in the discard.

I have been doing the majority of my anastomoses during the past few years by the end to end method, doing a plastic on the smaller caliber end to meet with the larger end, except in those instances in which the gut is friable from oedema. In these a side to side anastomosis is as a rule successful. Nor do I fear the hypothetical pocketing in doing a side to side anastomosis, because I always make the opening to extend to within $\frac{1}{2}$ inch of the inverted ends. I have had no more leakages in my end to end anastomoses than in the side to side, or end to side. Of course there are occasions where one feels that a few minutes saved by doing a side to side anastomosis will be advantageous. More and more frequently I am doing resections with direct anastomosis in those patients having sigmoid-rectal junction growths, thereby preserving the sphincteric functions, while formerly, owing to my difficulty with this type, I was accustomed to resect and transplant either anteriorly or posteriorly.

The operation of Mickulicz is quite amenable to the growths from the caecum to the recto-sigmoid junction. It has been performed by me, however, but ten times in the entire series. While it does seem by statistics to be a safer operation than an immediate end to end or side to side anastomosis, I question it from my personal experience, and object to the operation as being one of three to four times the duration of the suture method. Our actual hospital period for the Mickulicz operation has been an average time of ten weeks, while that of suture anastomosis has been but four weeks.

Implantation.—In regard to the implantation of the bowel in the perineum or high coccygeal or sacral zone, I find less and less objection to this procedure from my personal standpoint. As a result of observation in quite a number of such operative patients, I have been forcibly struck with the control, often better than before the operation, and also by the ease with which these victims preserve cleanliness. Also there is to the patient himself or herself a great deal less of disgust with life than is a feature with abdominal anus patients.

Preliminary Artificial Anus.—It is customary to have an artificial anus established for seven to fifteen days before doing the radical operation. This procedure is the cause of the loss of the



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toxaemia, existing at the time the patients first come under observation, and permits of cleansing the bowel to the site of the growth, thereby facilitating the resection and preventing sepsis to a great degree. It also brings about the subsidence of the oedema, often seen in the proximal portions, and the subsidence of the marked distension, thereby bringing about a more normal diameter of the proximal end for anastomosis with the distal end of the gut. Finally, it is a safety vent during the repair of the suture line of anastomosis, by preventing distension with gas and faeces and by taking the weight of the column of faeces from the site of anastomosis, again prevents leakage to a great degree.

Further Surgical Pointers.—A very able device for anastomosis by the end to end method is the Balfour tube, with invagination of the anastomosis ring. This application acts as an artificial anus in addition to being an invaginator for the ring of anastomosis.

I am not strongly inclined to believe that a complete circle of peritoneum is necessary to prompt union, though admitting its usefulness in promoting repair, but believe that in anastomosing—say the sigmoido-rectal zone or sigmoid—that the first essentials are the preservation of the muscular and mucous membrane circulation, the exclusion of all fat lobules, and the accurate approximation of the muscular and mucous coats.

Admitted that anastomosis in these zones is particularly liable to faecal fistula formation, then the step of all is the instituting of proper and competent drainage for a few days. In the anastomosis proximal to the sigmoido-rectal zone, I prefer no drain except in the skin wound.

END RESULTS

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2. In those in whom no appreciable metastasis at remote zones are found, extension of life from months to years. In this series we have traced the greater number of patients and find that there are several of each variety living from one to 6 years.

The method of Mickulicz was done ten times, end to end anastomosis 45 times and side to side anastomosis 12 times. The mortality during the past 3 years has been in marked contrast to that of the first 3 years—about 5 per cent. in the former as compared to 15 to 18 per cent. in the latter. A great deal of this lowering of the mortality has been due, I feel, to the preliminary drainage by means of an artificial opening, and the care observed in placing this opening remote from the field of expected removal. This latter prevents undue adhesion work and soiling of the area by handling of an artificial anus when made

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in or close to the segment of gut to be excised. Also a goodly portion of the high mortality has been due to the desperate condition in which some of the patients came to us, as several died following the performance of an artificial anus operation even under local or gas-oxygen anesthesia. This was due to the toxæmia from obstruction absorption.

RADIUM AND ROENTGENOTHERAPY

I do not feel competent to discuss radium or roentgenotherapy. The question of sickening the cell growth in patients, when the growth can be reached, is one of weight, well worth considering, although so far I cannot speak with the same fervor as do some of my confreres. At present radium has its place in the treatment of growths in the rectum, but has again been rather disappointing to me in several instances of supposed cures, which relighted in from 6 to 9 months with redoubled vigor, very rapidly placing the patients beyond operative relief.

AIDS IN DIAGNOSIS

Aids in diagnosis, that are of inestimable value, are the proctoscope and X-ray. No patient, who has pain in the lower back, perineal or sciatic distribution, who complains of distressing flatulence, tenesmus or blood and mucus in the stool, should be allowed to leave the physician's observation before proctoscopic examination is

made. No patient with abdominal colics, sense of distress at any of the colonic flexures or throughout its course, nor in the event of a slow loss in weight, with or without evidence in the faeces, should be dismissed from observation until a careful series of X-ray plates have been taken. These should be taken both from a barium or bismuth intake by mouth and by enema. When one suspects a malignancy or other variety of obstruction impending, it is advisable to take the X-ray first by means of enema. On two occasions recently we have seen an acute obstruction instituted by the intake by mouth, due to the mass-forming, rock-like character of the barium, causing a plug at the contracted lumen, necessitating thereby an emergency operation.

There are times when the greatly distended bowel will produce spasms of the appendix (appendicular colic). As a result of these misleading symptoms, appendectomies had been done in 5 instances in patients entering my service, which were followed in a few days to weeks by a revised diagnosis for correct operative procedure.

Ohio Gets 'Nother Convention

The National Anesthesia Research Society, in convention at Kansas City, October 24-8, chose Columbus as the site of its next annual meeting, which will probably be held in October, 1922.

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NEWS NOTES of OHIO

Fremont—Dr. Clyde L. Smith of this city was elected illustrious grand master of the Royal and Select Master Masons of Ohio at a meeting held in Dayton recently.

Akron—Dr. E. B. Foltz has returned from a camping trip through Yellowstone and Glacier national parks.

Cincinnati—After 16 years service, Dr. Harry Hines has resigned from the surgical staffs of the General Hospital and the University of Cincinnati, to devote his time to private practice.

Port William—Dr. H. B. Wideman of Cleveland has moved to this village and is occupying the office formerly used by Dr. J. H. B. Waring, now in Blanchester.

Fostoria—Dr. C. A. Henry has been elected president of the Seneca County Pension Board. Dr. B. R. Miller of Tiffin is secretary.

Shelby—The Italian government has conferred upon Dr. E. D. Dowds of this city, the rank of Chevalier of the Order of the Crown of Italy in recognition of his services as a captain in the medical corps of the Army during the World War.

Athens—Dr. and Mrs. Wiley T. Sprague have returned from a two months' tour of the Rocky Mountains and Pacific Coast country, visiting the National Park and other points of interest. Dr. Sprague spent four weeks in clinical work at San Francisco and upon the return journey attended sessions of the Colorado State Medical Society meeting in Pueblo.

Zanesville—Final plans for the erection of a new medical clinic building in this city have been completed and construction will be started soon.

Painesville—Dr. E. S. Jones, for eight years a resident of Lake County and for seven years secretary of the Lake County Medical Society, has assumed a position on the staff of Warrensville Tuberculosis Sanitarium, near Cleveland.

State Meeting Papers

The Eye, Ear, Nose and Throat Section of the State Association is inviting papers on ophthalmology for presentation before the next annual meeting to be held in Cincinnati, May 2, 3 and 4. Anyone who has a paper or case report should submit same now to the section secretary, Dr. W. W. Alderdyce, 513 Madison Ave., Toledo, for acceptance. Those desiring to participate in the programs of other sections are also urged to communicate with the officers of the respective sections at the addresses given on page 698 of the October *Journal*.

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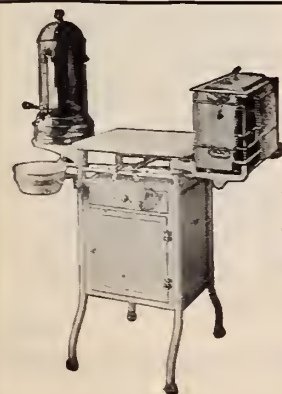
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Medical Science Will Solve Problems of Crime, Declares Report Suggesting Treatment of Crime as a Disease

Practical steps in the treatment of crime as a disease are outlined in the Cleveland Foundation's report on "Medical Science and Criminal Justice," the fifth of the Justice survey. Dr. Herman M. Adler, Illinois state criminologist and professor of criminology, University of Illinois, author of the report, delivered the conclusions found therein before a meeting of the Cleveland Academy of Medicine, recently, prior to its presentation to the public.

Is the criminal always in some degree insane or mentally irresponsible for his acts? How much recurrent crime may be traced to unscientific and antiquated methods of handling crime?

Dr. Adler took hold of these questions already prevalent in discussions of crime, even among laymen. His answer was that medical science, if given a chance, eventually will solve most of the problems of crime.

For Cleveland he proposed these first steps:

Abolish the present office of coroner.

Substitute a medical examiner, a physician expert in pathology.

Give the medical examiner sufficient assistants, laboratories, autopsy rooms and facilities for keeping records.

BEGIN WORK IN SCHOOLS

Go back to the schools and establish a division of mental health, under direction of a competent psychiatrist.

Supplement present cooperation between schools and juvenile court with careful mental and physical examination of every child in trouble.

Have three additional police surgeons on full time. One of them to be an expert psychiatrist to supervise not only mental standards of police department but to guide police in their handling of criminals.

Make it possible to have mental examinations of all criminals coming before any of the courts.

Have chief psychiatrist appointed by judge of probate and empowered to choose his own staff of assistants.

Institute research into the fundamental "whys" of crime.

For this last purpose, Dr. Adler suggested a privately endowed clinic, preferably in connection with Western Reserve University.

In his address, Dr. Adler pointed to the progress in grading the mentality of people by established psychological tests.

Of even more importance, however, he declared

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recent discoveries as to the relation between mental and physical defects, the influence on mentality and on conduct of physical causes.

STUDY OF MENTALITY DISCUSSED

"The study of the mentality of an individual from the point of view of psychiatry requires something further, however, than merely testing the mind or the nervous system," Dr. Adler declared. "One cannot dissect the living human being and deal with one portion only. One of the characteristics of a living organism is that every part is in relation with every other. Nowhere is this more important than in the pathology of the mind.

"Of late a great deal of attention has been paid to the influence on mentality of certain factors which lie outside the nervous system. The existence of physical disease elsewhere in the body, as, for instance, in the delirium of fever, various intoxications and auto-intoxications, the effect of digestive disturbances, and, above all, the more newly disclosed effects of various glands and organs, such as the thyroid and the sex glands, are examples of these factors.

"It will be clear, therefore, that the examination of mentality from this point of view cannot be conducted with the same apparent exactness as is often possible in the investigation of the mental age. It must also be clear that this type of investigation requires the application of all the medical knowledge available and must, therefore, be made by a medical man with special experience in this field."

Dr. Adler cited statistics collected at the Warendsville correction institutions showing the close association and relativity of crime, low mentality and physical disease.

* * *

The following editorial appeared in *The Cleveland Plain Dealer* following presentation of Dr. Adlers' report before the Academy of Medicine:

"That the average criminal is a proper subject for the physician instead of the criminal court is the contention of Dr. Herman M. Adler, state criminologist of Illinois. His investigations made in connection with the Cleveland crime survey in local corrective institutions have established beyond a reasonable doubt the close relation that exists between crime, low mentality and physical disease.

"Of the facts in regard to these matters the public has been generally informed. The correlation between crime and the mentally deficient has been the subject of wide discussion in this community during the past year and a half during which the number of particularly gruesome crimes seems to have been on the increase. The state legislature has recently appropriated funds for additional hospital facilities for the mentally deficient, but the state and society have still fur-

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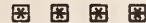


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ther measures of protection and correction to take against the delinquent.

"These measures as suggested by Dr. Adler are mainly of a highly scientific and technical character which places them beyond the ken of the rank and file. Such good results have been obtained in other communities through directing the attention of the medical profession to the defective and the criminal that the report of Dr. Adler should serve a more useful purpose than that of acquainting us further with conditions that have been suspected for many years.

"His findings and recommendations are in the hands of the council of the Cleveland Academy of Medicine representing the expert medical opinion of the city and community. Whether or not these recommendations will be crystallized into changes in methods of dealing with the mentally and physically diseased will in all probability be determined by that body and those who are entrusted with the care of these groups.

"It was the obvious intention of the Cleveland Foundation in undertaking this exhaustive investigation to contribute something to the welfare of the community and make Cleveland a better and safer place in which to live. It will be a grave mistake and the community itself can properly be charged with contributory negligence if this report of Dr. Adler and his recommendations are not made to serve as the basis for better corrective measures and more advanced methods of dealing with the diseased who are potential criminals."

Small Advertisements

Wanted—To correspond with physicians interested in touring Europe during the Spring of 1922, for the purpose of study and travel. Hospitals of Paris, Rome and Bern will be visited with a post-graduate course at London and Edinburgh. F. Young, M. D., Center and State Sts., Marion, Ohio.

Physician Wanted—Proctologist for established practice. References exchanged. Address A, care *The Journal*.

Physician Wanted—To locate in the village of Windsor, Ashtabula County. *The Journal* recently received a petition signed by 121 residents, representing families including 409 persons, asking assistance in securing a physician for the village and vicinity, in which other nearby towns are said to be in need of medical service. Windsor has a population of about 900. Information may be had from Mrs. Emma D. Loomis, Mr. R. H. Barnard or Mr. H. F. Payne, Windsor, Ohio.

Opening for Physician—Any young physician wishing location in a small town located 25 miles from Toledo, in good farming vicinity, with immediate business, can get particulars by addressing Dr. Clarence S. Ordway, East Side Hospital, 1153 Oak St., Toledo.

Thirty Million Seals to be Sold in Ohio

The large and enthusiastic force of business men, club women, doctors, lawyers, newspaper men, ministers, teachers, labor leaders and others marshalled behind the 1921 Christmas Seal Sale, which starts December 1st and continues until Christmas, forecasts a banner sale of the health

seals in Ohio, making possible greater strides in the warfare against tuberculosis in this state. The medical and other professions represented on the State Christmas Seal Committee, as well as the civic and welfare bodies, have responded heartily to the appeal for help in this worthy cause and there is every indication that when the sale is completed, Ohio will have disposed of the thirty million seals allotted to this state.

The Christmas seal has been gaining in popularity each year. The seal sale started in 1908 by the American Red Cross which raised a little over \$100,000 the first year, attained a magnitude last year of more than \$3,000,000. The Ohio Public Health Association is the state agency for the sale of seals in Ohio.

Do you believe that the fitting of trusses is a part of the Practice of Medicine? If so, send your patients needing trusses to

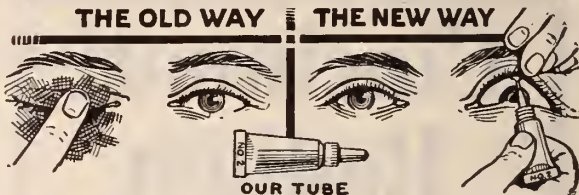
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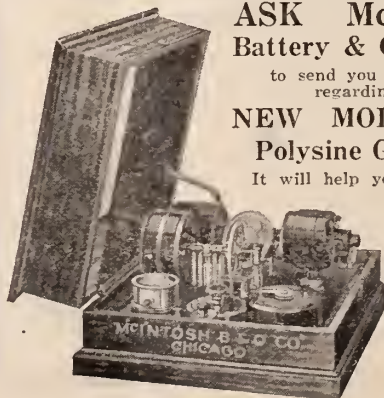
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There is only one "Snook"—the highest perfection yet attained in X-Ray transformers.



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A physician's office without an X-Ray apparatus is not yet so old fashioned as a business office without a typewriter. But the time is almost here when patients will expect to be X-Rayed by their family physicians.

Few professional letters are written with pens nowadays. But many diagnoses are still made without the aid of the X-Ray, despite the simplicity of X-Ray apparatus, despite the certainty that the X-Ray lends.

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depends on the requirements of his practice—on what he wants to accomplish.

The physician needs guidance. The Victor organization gives it to him. For nearly thirty years this organization has served as engineering counselor to the medical profession so far as the electro-medical apparatus is concerned. It places its knowledge and experience at the service of the physician. Victor responsibility does not end with the installation of a machine.

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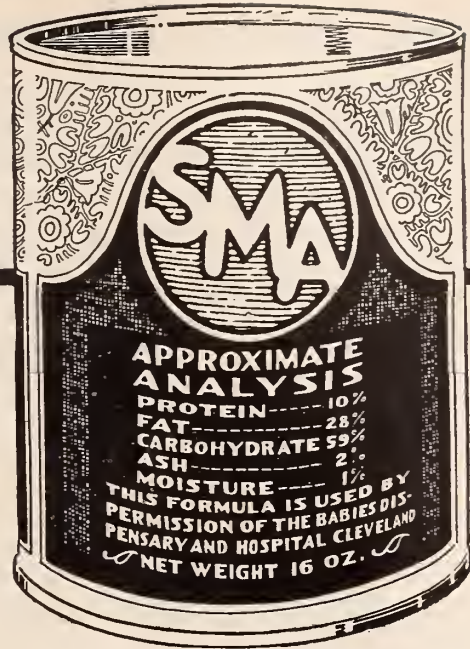


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A Food to keep Babies well
adapted to Mother's Milk

Formula by permission of
the Babies' Dispensary
and Hospital
of Cleveland

*To be used only
under direction
of a physician*



SEVEN years ago *S. M. A. was developed in the Research Laboratories of the Babies' Dispensary and Hospital of Cleveland under the direction of Dr. H. J. Gerstenberger. During the first three years Dr. Gerstenberger and his associates used S.M. A. for the dispensary babies who were deprived of mother's milk. Then a few other physicians experienced in baby feeding were permitted to use it in their practice. And finally, on January 16, 1920, S. M. A. was made available to all physicians in Cleveland.

The mass of successful experience which has been built up in Cleveland during these seven years, by scores of physicians, in several thousand cases, has prompted the Babies' Dispensary and Hospital of Cleveland to permit the formula to be used by the physicians of the entire country.

S. M. A. has never been used except

*H. J. Gerstenberger et al. I. Studies in the Adaptation of an Artificial Food to Human Milk. Am. J. Dis. Child. Vol. X, Pg. 249-265.

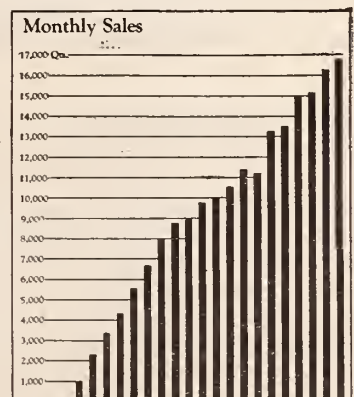
H. J. Gerstenberger et al. II. Studies in the Adaptation of an Artificial Food to Human Milk. (A Report of Three Years' Clinical Experience with the Feeding of S. M. A.) Am. J. Dis. Child. Vol. XVII, Pg. 1.

on the advice of physicians. The label on the S. M. A. tin contains no directions. Instead it bears the injunction—"Use only under the direction of a physician."

The purpose of S. M. A. as a finished commercial product is to help physicians in their work of feeding babies who are deprived of mother's milk. S. M. A. is in powdered form, and will keep indefinitely.

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CORRECTED ROLL OF DISTRICT AND COUNTY SOCIETIES

Societies	President	Secretary	
First District. G. D. Lummis, Middletown.....Eric Twachtman, Cincinnati...			
Adams.....	G. E. Neal, Manchester.....	O. T. Sproull, West Union.....	3d Wednesday in April, June, Aug., Oct.
Brown.....	R. B. Hannah, Georgetown.....	Geo. P. Tyler, Jr., Ripley.....	4th Wednesday in Feb., May, and Nov.
Butler.....	James G. Grafft, Trenton.....	F. M. Fitton, Hamilton.....	2d Wednesday, monthly
Clermont.....	A. D. Spence, Bethel.....	O. C. Davison, Bethel.....	3d Wednesday, monthly
Clinton.....	F. A. Peele, Wilmington.....	Kelley Hale, Wilmington.....	2d Thursday, monthly
Fayette.....	H. L. Stitt, Wash'gton C. H.....	Lucy Pine, Washington, C. H.....	1st Thurs., March, June, Sept. Dec.
Hamilton.....	Gordon McKim, Cincinnati.....	Ralph Carothers, Cincinnati.....	Monday evening of each week
Highland.....	H. W. Chaney, Sugartree Ridge.....	H. H. Lowe, Leesburg.....	1st Wednesday in Jan., April, July, and Oct.
Warren.....	T. E. Keelor, Lebanon.....	Herschel Fisher, Lebanon.....	1st Tuesday in May, June, July, Sept., Oct. and Nov.
Second District. C. I. Stephen, Ansonia.....D. B. Conklin, Dayton.....Dayton			
Champaign.....	David H. Moore, Urbana.....	J. F. Shultz, Urbana.....	2d Thursday, monthly
Clark.....	William Ultes, Springfield.....	R. R. Richison, Springfield.....	2d and 4th Monday each month
Darke.....	G. W. Burnett, Greenville.....	A. F. Sarver, Greenville.....	2d Thursday each month
Greene.....	W. A. Galloway, Xenia.....	C. H. Denser, Xenia.....	1st Thursday each month except July and August
Miami.....	J. B. Barker, Piqua.....	G. J. Hance, Troy.....	1st Thursday each month
Montgomery.....	C. N. Christman, Dayton.....	A. W. Carley, Dayton.....	1st and 3d Friday each month
Preble.....	S. P. Carter, W. Manchester.....	H. Z. Silver, Eaton.....	3d Thursday, monthly
Shelby.....	A. W. Hobby, Sidney.....	V. W. LeMaster, Sidney.....	1st Thursday, monthly
Third District. C. H. Clark, Lima.....Norris Gillette, Toledo.....Lima			
Allen.....	C. H. Clark, Lima.....	J. R. Tillotson, Lima.....	1st and 3d Tuesdays
Auglaize.....	W. S. Stuckey, Wapakoneta.....	C. L. Mueller, Wapakoneta.....	3d Thursday, monthly
Hancock.....	W. J. Zopfi, Findlay.....	Nellie B. Kennedy, Findlay.....	1st Wednesday, monthly
Hardin.....	D. H. Bowman, Kenton.....	W. A. Belt, Kenton.....	1st Thursday, monthly
Logan.....	F. B. Kaylor, Bellefontaine.....	M. L. Pratt, Bellefontaine.....	1st Friday, monthly
Marion.....	H. L. Uhler, Marion.....	J. A. Dodd, Marion.....	1st Tuesday, monthly
Mercer.....	J. P. Symons, Rockford.....	D. H. Richardson, Celina.....	2d Tuesday, monthly
Seneca.....	V. L. Magers, Tiffin.....	E. H. Porter, Tiffin.....	3d Thursday, monthly
Van Wert.....	S. A. Edwards, Middlepoint.....	N. E. Leake, Van Wert.....	2d and 4th Monday, monthly
Wyandot.....	Frederick Kenan, U. Sandusky.....	B. A. Moloney, U. Sandusky.....	1st Thursday, monthly
Fourth District. (With Third District in Northwestern Ohio District)			
Defiance.....	W. S. Powell, Defiance.....	F. W. Watkins, Defiance.....	2d Wednesday, bi-monthly
Fulton.....	W. L. Lathrop, Metamora.....	R. W. Reynolds, Fayette.....	Semi-monthly
Henry.....	I. H. Boesel, McClure.....	C. H. Skeen, Napoleon.....	3d Wednesday, monthly
Lucas.....	L. A. Levison, Toledo.....	J. F. Wright, Toledo.....	Friday, each week
Ottawa.....	A. A. Brindley, Pt. Clinton.....	S. T. Dromgold, Elmore.....	2d Thursday, monthly
Paulding.....	Ray Mouser, Latty.....	R. J. Dillery, Paulding.....	3d Wednesday, monthly
Putnam.....	P. D. Bixel, Pandora.....	H. A. Neiswander, Pandora.....	1st Thursday, monthly
Sandusky.....	E. W. Baker, Clyde.....	C. I. Kuntz, Fremont.....	last Thursday, monthly
Williams.....	W. L. Hogue, Montpelier.....	J. A. Wertz, Montpelier.....	2d Thursday, each month
Wood.....	J. W. Rae, Bowling Green.....	F. V. Boyle, Bowling Green.....	2d Thursday, monthly
Fifth District. (No District Society)			
Ashtabula.....	R. B. Wynkoop, Ashtabula.....	J. J. Hogan, Ashtabula.....	2nd Tuesday, monthly
Cuyahoga.....	W. B. Chamberlin, Cleveland.....	Lester Taylor, Cleveland.....	Every Friday evening
Erie.....	F. F. Lehman, Sandusky.....	H. N. Sarchett, Sandusky.....	Last Thursday, monthly
Geauga.....	J. A. Heeley, Parkman.....	Isa Teed-Cramton, Burton.....	2d Thursday, Jan., March, July and Sept.
Huron.....	R. L. Morse, Norwalk.....	J. D. Coupland, Norwalk.....	2d Thursday, monthly
Lake.....	V. H. Tuttle, Madison.....	E. S. Jones, Painesville.....	1st Monday, monthly

Societies	President	Secretary	
Lorain.....	J. R. Pipes, Avon Village.....	W. E. Hart, Elyria.....	2d Tuesday, monthly
Medina.....	M. F. Miller, Wadsworth.....	H. P. H. Robinson, Medina.....	3d Wednesday
Trumbull.....	R. R. Rogers, Warren.....	John D. Knox, Warren.....	3d Thursday monthly except June, July and August

Sixth District.

Ashland.....	C. C. Patton, Ashland.....	D. H. Mohn, Ashland.....	1st Tuesday, Jan., March, May, July, Sept., Nov.
Holmes.....	M. B. Pomerene, Millersburg.....	A. T. Cole, Millersburg.....	1st Tuesday, monthly
Mahoning.....	W. E. Ranz, Youngstown.....	H. E. Patrick, Youngstown.....	3d Tuesday, monthly
Portage.....	W. B. Andrews, Kent.....	E. H. Knowlton, Mantua.....	1st Wednesday, monthly
Richland.....	G. C. Smith, Mansfield.....	Chas. R. Keller, Mansfield.....	3d Thursday, monthly
Stark.....	H. P. Pomerene, Canton.....	George S. Hackett, Canton.....	3rd Tuesday, Jan., March, May, July, Sept., Nov.
Summit.....	R. V. Luce, Akron.....	A. S. McCormick, Akron.....	1st Tuesday, monthly
Wayne.....	O. P. Ulrich, Orrville.....	O. G. Grady, Orrville.....	2d Tuesday, Jan., April, July, Oct.

Seventh District

Belmont.....	R. H. Wilson, Martins Ferry.....	J. S. McClellan, Bellaire.....	2d Wednesday, monthly, at 1:45 p. m.
Carroll.....			
Columbiana.....	P. C. Hartford, E. Palestine.....	C. R. Larkin, East Liverpool.....	2d Tuesday, monthly, alter- nately, in Lisbon, Salem and E. Liverpool
Coshocton.....	D. Edmund Cone, Coshocton.....	J. D. Lower, Coshocton.....	4th Thursday, April, June, Sept., Dec.
Harison.....	H. I. Heavilin, Cadiz.....	R. P. Rusk, Cadiz.....	1st Wednesday, monthly
Jefferson.....	F. H. Riney, Mingo Junction.....	J. R. Mossgrove, Steubenville.....	2d Tuesday, monthly
Monroe.....	G. W. Steward, Woodsfield.....	J. H. Pugh, Woodsfield.....	2d Wednesday, monthly
Tuscarawas.....	A. C. Dempster, Uhrichsville.....	P. J. Alspaugh, N. Philadelphia.....	2nd Thursday, monthly

Eighth District D. J. Matthews, Zanesville.....E. M. Brown, Zanesville.....

Athens.....	W. S. Rhodes, Nelsonville.....	T. A. Copeland, Athens.....	1st Tuesday, monthly
Fairfield.....	Ralph Smith, Lancaster.....	J. M. Lantz, Lancaster.....	2d and 4th Tuesday, monthly
Guernsey.....	C. A. Moore, Cambridge.....	F. M. Mitchell, Cambridge.....	1st and 3d Tuesday each month
Licking.....	Carl Evans, Newark.....	W. E. Shrontz, Newark.....	Last Thursday, monthly
Morgan.....	C. V. Davis, Pennsville.....	D. G. Ralston, McConnellsville.....	1st Wednesday, monthly
Muskingum.....	C. U. Hanna, Zanesville.....	Maurice Loebell, Zanesville.....	1st Wednesday, monthly
Noble.....	G. H. Zimmerman, Belle Valley.....	J. L. Gray, Caldwell.....	1st Thursday, monthly
Perry.....	J. C. Sommers, Somerset.....	C. B. McDougal, N. Lexington.....	3d Thursday, monthly
Washington.....	E. W. Hill, Jr., Marietta.....	A. G. Sturgiss, Marietta.....	2d Wednesday, monthly

Ninth District S. B. McKerrihan, Portsmouth.....J. G. Murfin, Portsmouth.....Portsmouth

Gallia.....	C. G. Parker, Gallipolis.....	Milo Wilson, Gallipolis.....	1st Wednesday, monthly
Hocking.....	O. V. Donaldson, Gore.....	M. H. Cherrington, Logan.....	
Jackson.....	A. G. Ray, Jackson.....	R. W. Caldwell, Jackson.....	1st Tuesday, monthly
Lawrence.....	O. H. Henninger, Ironton.....	E. E. Ellsworth, Ironton.....	1st Thursday, monthly
Meigs.....	P. A. Jividen, Rutland.....	L. A. Thomas, Middleport.....	1st Wednesday, April, July and Oct.
Pike.....	F. C. Metzger, Waverly.....	L. E. Wills, Waverly.....	1st Monday, monthly
Scioto.....	Tunis Nunemaker, Portsmouth.....	Harry Rapp, Portsmouth.....	2d Monday, monthly
Vinton.....	O. S. Cox, McArthur.....	H. S. James, McArthur.....	4th Wednesday, monthly

Tenth District J. T. McCarty, Delaware.....Rees Philpott, Delaware.....Delaware

Crawford.....	R. J. Caton, Bucyrus.....	H. S. McClure, Bucyrus.....	2d Thursday, monthly
Delaware.....	I. T. McCarty, Delaware.....	Rees Philpott, Delaware.....	1st Friday, each month
Franklin.....	G. C. Schaeffer, Columbus.....	James A. Beer, Columbus.....	1st four Mondays
Knox.....	H. W. Blair, Mt. Vernon.....	C. D. Conard, Mt. Vernon.....	2d and 4th Wednesday, from March to middle of Dec.
Madison.....	L. E. Evans, West Jefferson.....	H. V. Christopher, London.....	4th Thursday
Morrow.....	R. L. Pierce, Mt. Gilead.....	Todd Caris, Mt. Gilead.....	1st Wednesday, monthly
Pickaway.....	J. B. May, New Holland.....	D. V. Courtright, Circleville.....	1st Friday, monthly
Ross.....	G. E. Robbins, Chillicothe.....	G. S. Mytinger, Chillicothe.....	1st Tuesday, monthly
Union.....	C. O. Thompson, Raymond.....	E. J. Marsh, Broadway.....	2d Tuesday



HOSPITAL NOTES

Dr. Ben R. McClellan, Xenia, has been made chairman of the Ohio committee of the American Legion on hospitals which is charged with the investigation of hospitals used for the care of disabled soldiers. Dr. McClellan is the owner of McClellan Hospital in Xenia, and is at present directing the erection of a new hospital building farther from the center of the city.

—The new children's section of the Franklin County Tuberculosis Hospital was opened for the admission of patients, October 31. The building was erected at a cost of \$198,973 and will accommodate about 200 patients. It is modern in every detail, including school rooms, diet kitchen and play space.

—Plans for transforming the former Elks' building at Camp Sherman into a hospital for students have been approved by the head of the Veterans' Aid Bureau.

—A prenatal clinic has been established in connection with the Jewish Hospital, Cincinnati.

—Directors of Lakeside Hospital, Cleveland, are considering plans for the erection of a convalescent hospital and other hospital buildings on the lake shore, two miles north of Willoughby. The site is a 210-acre tract of land donated by Edward S. Harkness of New York, formerly of Cleveland.

—Dr. Anna B. Durrie of Washington, D. C., has joined the staff of the Medical and Surgical Sanitarium and Hospital, Mt. Vernon.

—The cost of treating patients at Springfield City Hospital in September was \$9,284.53. Two hundred and eighty-nine patients were treated at a net per diem cost of \$2.77 per capita. Dr. A. H. Potter has recently been added to the surgical staff.

—The new Otis Hospital, Celina, is the recipient of a \$500.00 gift from the Fraternal Order of Eagles for the equipment and complete furnishing of a room.

—Contracts aggregating \$73,529 have been let by the trustees of Marion City Hospital for remodeling the institution. Improvements to be installed include modern plumbing, heating and lighting systems and an elevator.

—Property near East Sparta chosen by Stark County commissioners as the site for a county tuberculosis hospital has been disapproved by the State Department of Health on the ground that it is too far from the county's center of population. The medical profession of the community generally opposed the site for the same reason.

Acidosis

Readily and definitely recognized and estimated by the determination of the alveolar air carbon dioxide tension.

The Alveolar Air Outfit

A diagnostic apparatus, suggested by Dr. W. McKim Marriott, which combines a simple technic with a degree of accuracy sufficient for all diagnoses.

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RELATIVE infrequency of reaction, rapid disappearance of contagious lesions, and general therapeutic effectiveness seem to indicate that Silver-Salvarsan is a drug of real value in the treatment of syphilis.

Silver-Salvarsan requires no alkalization and its ease of administration commends it to many practitioners.

More than two million injections of Silver-Salvarsan have been given in the United States and abroad.

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THE complicated technic incident to the preparation of solutions of Arsphenamine with the attendant danger of improper alkalization as well as the rapidity with which the Arsphenamine oxidizes and forms toxic compounds during the preparation of

the solution, make it apparent that the widespread use of this product is dependent upon the development of a safe and ready-to-use solution.

The Squibb Laboratories therefore take pleasure in announcing that they have ready for distribution

Solution Arsphenamine Squibb

Prepared according to the process devised by Dr. Otto Lowy; licensed by the U. S. Public Health Service and approved by the Council on Pharmacy and Chemistry of the American Medical Association.



READY FOR IMMEDIATE USE.

Solution Arsphenamine Squibb offers the advantages of accuracy in preparation, perfect alkalization, and safety in use.

It avoids the danger of oxidation with the consequent formation of toxic oxidation products, and it eliminates the necessity for costly apparatus and the loss of time spent in preparing solutions.

Solution Arsphenamine Squibb is a scientifically prepared solution of Arsphenamine. It is in no sense a substitute for Arsphenamine.

Solution Arsphenamine Squibb is marketed in 80 Cc. and 120 Cc. ampuls with all necessary attachments, ready for administration.

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We also offer Plain and Chromic Ligatures, sizes 000 to number 4 regular lengths \$2.50 per dozen, emergency lengths, \$1.50 per dozen (nothing but the smooth side of the intestines is used in the manufacture of the Armour ligatures).



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Pulmonary and Laryngial Tuberculosis
 McCONNELLSVILLE, OHIO

The sanatorium is located at McConnellsville, Ohio (a town of 3000) upon a beautiful high hill, with picturesque surroundings, and a pleasant environment. It is built on the cottage plan, (each patient having either an individual cottage or a cottage with a sleeping porch for two) and equipped for the scientific diagnosis and treatment of pulmonary and laryngeal tuberculosis.

The cottages have all modern conveniences, such as individual call bells, hot and cold running water in each cottage, electric lights, and a very adequate supply of furniture.

Climate means nothing in the treatment of pulmonary tuberculosis, so why send your patients west? The climate in Ohio is as good as any. The cardinal points of REST, FRESH AIR, PROPER FOOD, AND REGULATED EXERCISE is the method of treatment used.

CLOSE PERSONAL ATTENTION IS THE MOTTO OF THE INSTITUTION. Success in the treatment depends upon the stage of the disease at which the patient is admitted to the institution. The sanatorium acts as a "school" where patients are taught to live properly and to protect others. They also learn the value of rest. By giving your patient a short period of "schooling" he will be better prepared to follow instructions and will have increased his chances of arrestment of his disease.

When in doubt as to diagnosis, we will admit the case for observation and report.
 COMPLETE X-RAY DEPARTMENT AND LABORATORY.
 ARTIFICIAL PNEUMOTHORAX TREATMENT AND TUBERCULIN WHEN INDICATED.
 RATES, \$28.00 per week, which includes everything except an X-ray examination, which is made on admission.

Descriptive circular and other information on request.

Inquire of
 DR. EMMET FAYEN, Medical Director, Rocky Glen Sanatorium, McConnellsville, Ohio

The OHIO STATE MEDICAL JOURNAL

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approximately equal weights of creosote and lime, acts
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Attention, County Secretaries

Council of the State Association has authorized the acceptance of pro-rated dues for *new* members at the rate of \$3.00 for the period from July 1 to the end of the year, and \$2.00 for the period from October 1 to the end of the year. This ruling does not apply to delinquent members either for the year 1920 or previous years.

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Souther
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Clark

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In Bronchitis and Tuberculosis

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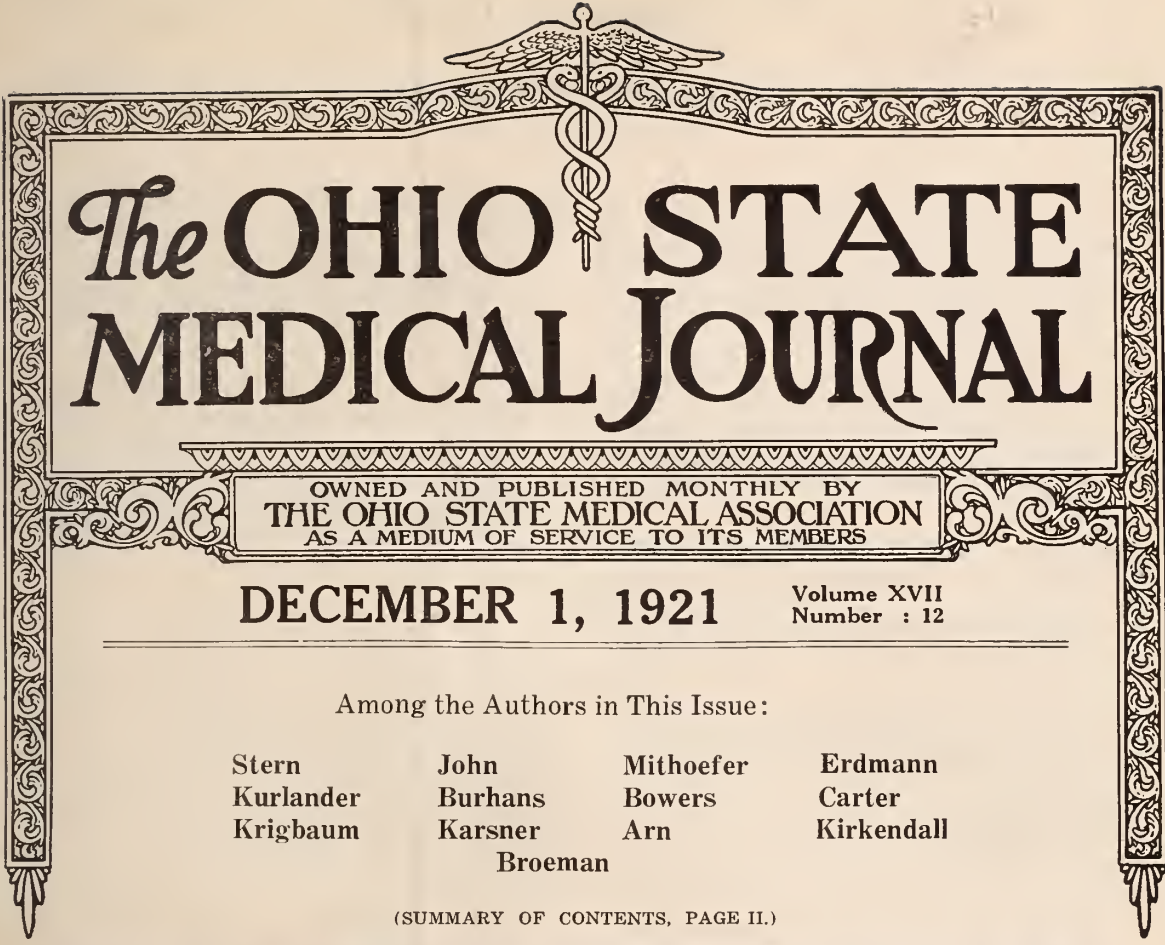
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